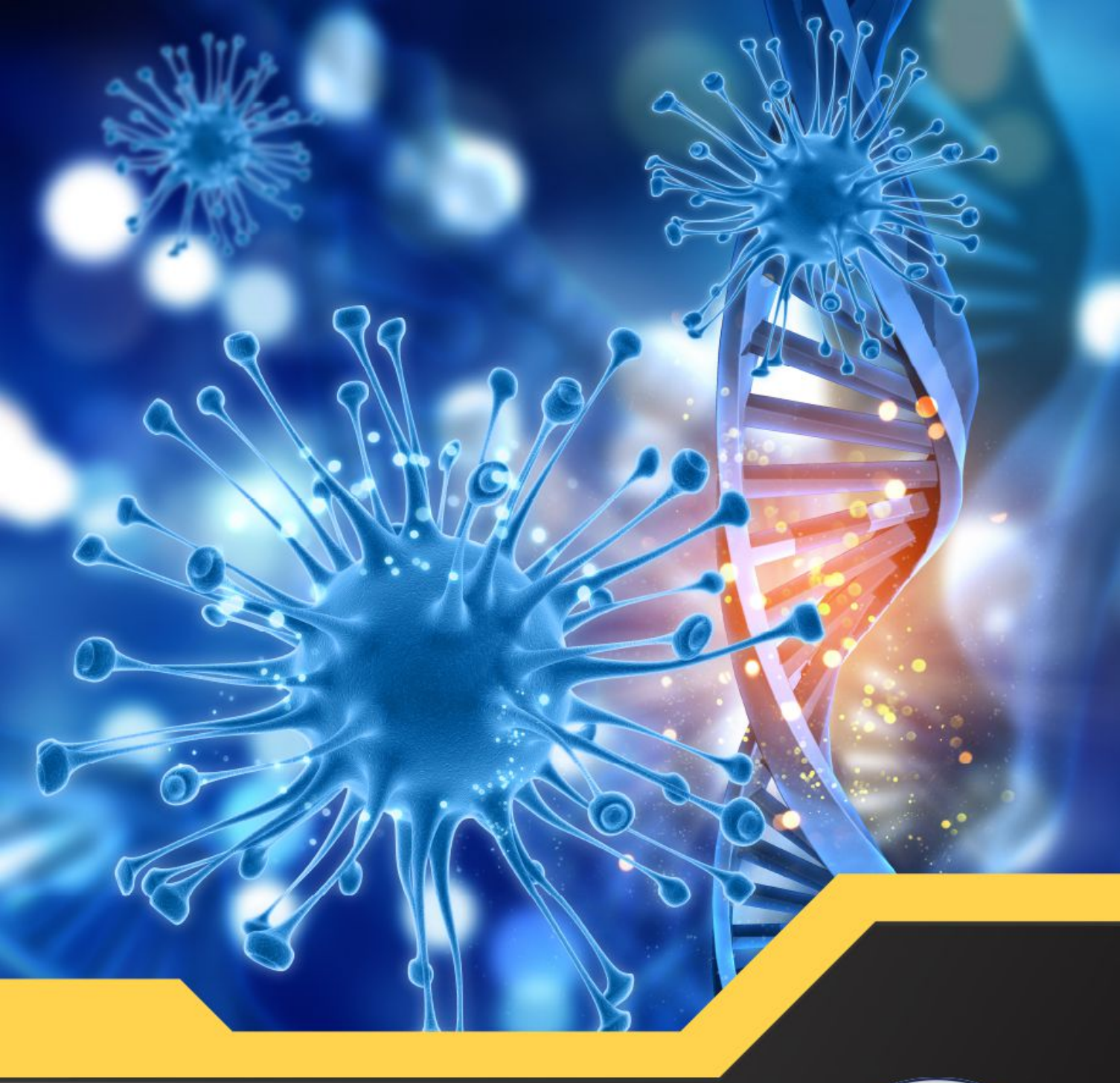

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Detection of Human Herpesvirus 8 Antibodies in Women with Breast Cancer in Kirkuk city

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ABSTRACT

The aim of the study is to evaluate the seroprevalence of human herpes virus type 8 (HHV-8) in women with breast cancer. The study has been conduct in Kirkuk city for the period from January 1, 2019 to April 1, 2019 on 50 breast cancer women with age group 21-70 years. The study has also included 40 healthy women as control group. The study included the collection of 3 ml of venous blood for identification and measurement of IgG antibodies towards the HHV-8 by using ELISA technique (KomaBiotech, Co, USA). The study also included taking of full information from cases like living situation, age. The study showed that the maximum frequency of HHV-8 infection (34%) recorded among breast cancer women comparing with the control group (10%), with highly significant relation. The majority of breast cancer women with positive IgG were within the age group 51-60 (41.18%) and the lowest rate was in the age group 21-3 years. The study showed that the maximum frequency of HHV-8 infection in breast cancer women was found in women with 2nd stage of breast cancer (58.83%) and the lowest rate was in the 1st stage. The highest rate of HHV-8 infection in breast cancer women (76.47%) were with metastasis to neighbor lymph nodes while compared with 23.53% without metastasis while all breast\t cancer women with HHV-8 negative were without metastasis. It has concluded that there was significant association between HHV-8 infection and occurrence of breast cancer and high rate of this infection has related to metastasis.

Keywords: HHV-8; Breast cancer; Kirkuk.

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الكشف عن الاجسام المضادة لفيروس الهربس البشري نوع 8 في النساء المصابات بسرطان الثدي في مدينة كركوك

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الخلاصة

كان الهدف من هذه الدراسة هو دراسة الانتشار المصلي لفيروس الهربس البشري نوع 8 لدى النساء المصابات بسرطان الثدي. أجريت الدراسة في مدينة كركوك للفترة من 1 يناير 2019 إلى 1 أبريل 2019 على 50 امرأة مصابة بسرطان الثدي مع الفئة العمرية 21-70 سنة. وشملت الدراسة أيضا 40 امرأة صحية كمجموعة سيطرة. تضمنت الدراسة جمع 3 مل من الدم الوريدي لتحديد وقياس الأجسام المضادة لـ IgG تجاه HHV-8 باستخدام تقنية ELISA . وشملت الدراسة أيضا أخذ معلومات كاملة من حالات مثل الوضع المعيشي ، والعمر. وأظهرت الدراسة أن اعلى نسبة للاجسام المضادة تجاه الفيروس (34%) تم تسجيلها بين النساء المصابات بسرطان الثدي مقارنة مع مجموعة السيطرة (10 ٪) ، مع وجود علاقة كبيرة للغاية. كانت غالبية النساء المصابات بسرطان الثدي مع وجود الاجسام المضادة لفيروس الهربس البشري نوع 8 كانت ضمن الفئة العمرية 51-60 (41.18 ٪) وكان أدنى معدل في الفئة العمرية 21-3 سنة. وأظهرت الدراسة أن الحد الأقصى لتكرار الإصابة بفيروس HHV-8 لدى النساء المصابات بسرطان الثدي وجد لدى النساء المصابات بالمرحلة الثانية من سرطان الثدي (58.83٪) وأدنى معدل كان في المرحلة الأولى. كانت أعلى نسبة للإصابة بفيروس HHV-8 عند النساء المصابات بسرطان الثدي (76.47 ٪) اللاتي لديهن انتشار للورم في الغدد الليمفاوية المجاورة مقارنة مع 23.53 ٪ النساء اللاتي ليس لديهن انتشار للورم في حين أن جميع النساء المصابات بسرطان الثدي مع HHV-8 سلبية لم يكن لديهن انتشار للورم . ويستنتج من الدراسة ان هناك علاقة كبيرة بين عدوى HHV-8 وحدوث سرطان الثدي وارتفاع معدل هذه العدوى كان مرتبطا بانتشار الورم وسوء الحالة المرضية

الكلمات المفتاحية: HHV-8 ؛ سرطان الثدي؛ كركوك.

1. Introduction

Breast cancer is the most common female cancer worldwide and the second leading cause of cancer death (after lung cancer) [1]. Through decades of research, factors including family history of breast cancer in first-degree relatives, benign breast disease, mammographic density. endogenous hormone levels, younger age at menarche, low parity, older age at first birth, older age at menopause, postmenopausal hormone use, ionizing radiation exposure, height, high postmenopausal body mass index. Low premenopausal body mass index have established as risk factors of breast cancer [2]. A family history of breast and/or ovarian cancer is also an important risk factor, indicating that the inherited genetic background of the individual plays a crucial role in breast cancer development in up to 27% of patients [3]. Carriers of mutated BRCA1 and BRCA2 genes are at a very high risk of getting breast carcinoma, but they represent only a small proportion of women with this disease. An association of human herpesvirus (HHV)-8 with breast cancer has also been suggested [4]. In addition, herpes simplex virus (HSV)-1 DNA is detected in some of the tissues from patients with breast cancer or fibroadenoma [5]. Several factors make HHV-8 a reasonable candidate for breast cancer [6], HHV-8 can infect and replicate in epithelial cells [7]. The aim of the study is to evaluate the seroprevalence of HHV-8 in women with breast cancer.

2. Material and Methods

The study is conduct in Kirkuk city for the period from January 1, 2019 to April 1, 2019 on 50 breast cancer women with age group 21-70 years. It has included 40 healthy women as control group. The study included the collection of 3 ml of venous blood for identification and measurement of IgG antibodies towards the HHV-8 by using ELISA technique (KomaBiotech, Co, USA). The study also included taking of full information from cases like living situation, age.

2.1. Statistical Test

The study and analysis of the results is carry out using SPSS version 22.1, which included the extraction of the P. value, which indicates the level of the difference between all the subjects in the study. $P<0.01$ considered significant.

3. Results

Table 1 shows that the maximum frequency of HHV-8 infection (34%) is record among breast cancer women comparing with the control group (10%), with highly significant relation.

Table 1: Seroprevalence of HPV in aborted and pregnant women.

HHV-8 IgG Abs	Breast cancer women		Control group		P. value
	No.	%	No.	%	
Positive	17	34	4	10	0.007
Negative	33	66	36	90	
Total	50	100	40	100	

Figure 1 shows the majority of breast cancer women with positive IgG are within the age group 51-60 (41.18%) and the lowest rate was in the age group 21-3 years.

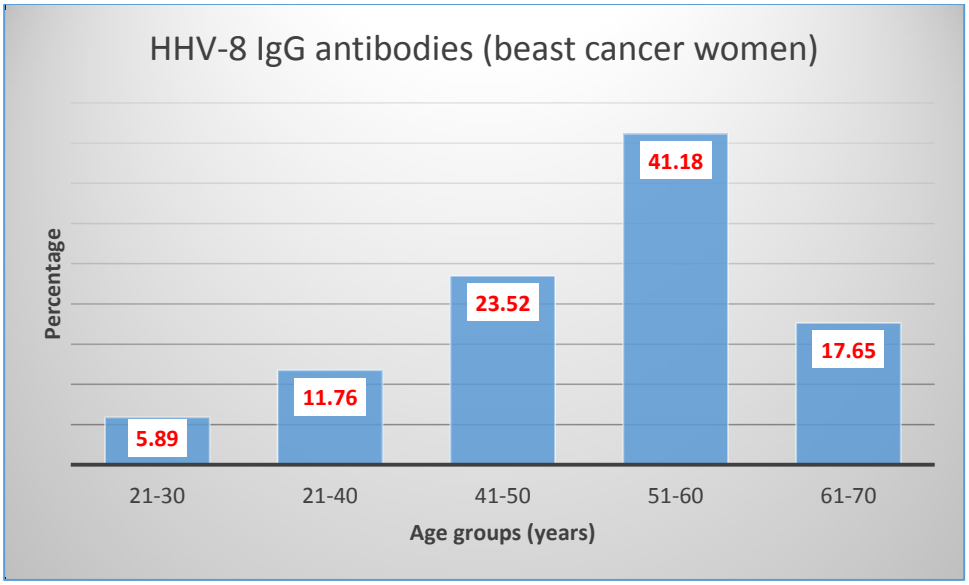

Figure 1: Distribution of breast cancer women with positive IgG according to age groups

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The study showed that the maximum frequency of HHV-8 infection in breast cancer women was found in women with 2nd stage of breast cancer (58.83%) and the lowest rate was in the 1st stage, Figure 2.

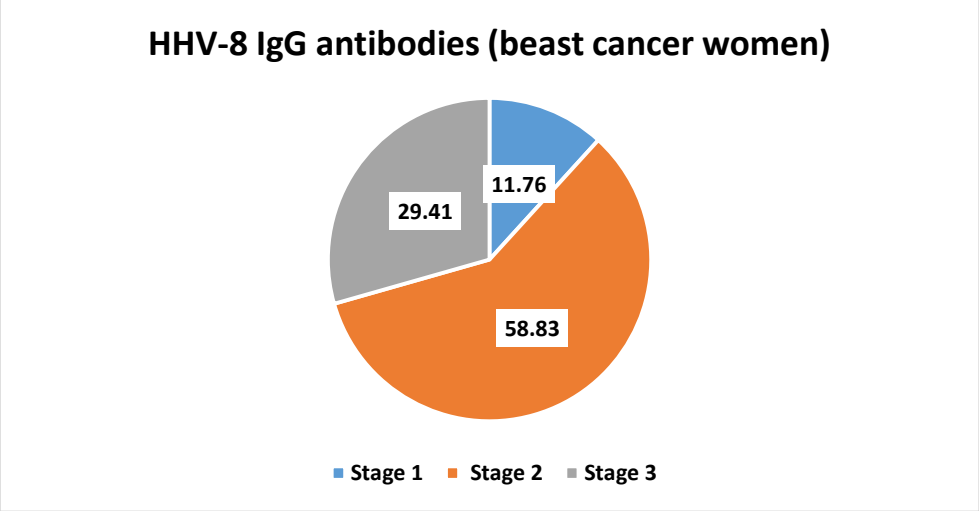

Figure 2: Distribution of HHV infection breast cancer women in according to stage of cancer

Figure 3 shows that the highest rate of HHV-8 infection in breast cancer women (76.47%) were with metastasis to neighbor lymph nodes while compared with 23.53% without metastasis while all breast\t cancer women with HHV-8 negative were without metastasis

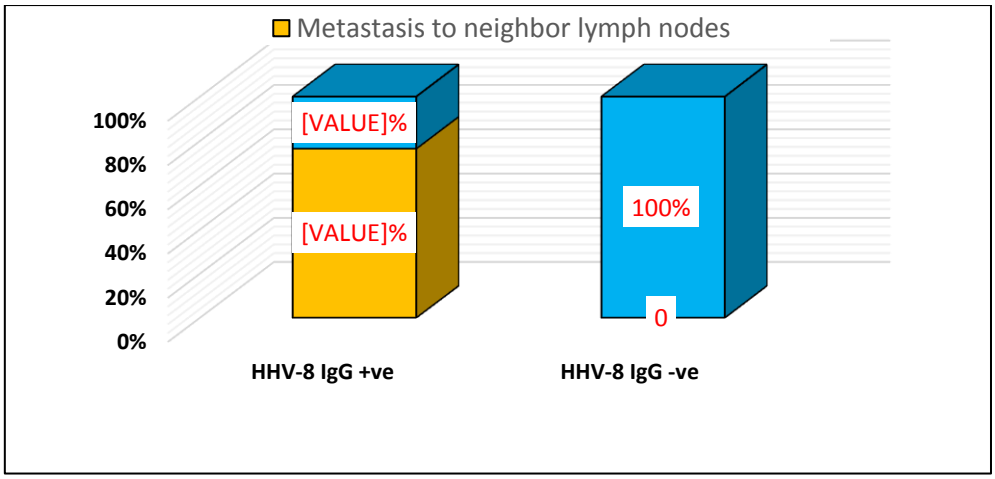

Figure 3: Distribution of HHV infection breast cancer women in relation to metastasis to neighbor lymph nodes.

4. Discussion

The virus known as HHV-8, also known as Sarcoma-associated virus is the eighth type of the herpesvirus family and is a common cancer in AIDS patients, as well as the most important etiological cancer of primary lymph nodes and some types of recurrent Castleman disease. Books and studies have indicated that this virus has a wide alkalam in causing crabs over the past decades to [8]. As in previous studies, the HHV-8 virus has a strong and positive relationship in the formation and development of cancerous tumors in and adjacent lymph nodes [9], although there is no evidence of association with uterine cancer and its associated sites [6,10]. Several studies have indicated that the HHV-8 virus has been found and found DNA in breast tissue for patients with cancer in many studies [5,8]. Newton *et al.* [3] The HHV-8 virus is demonstrate by detecting the presence of antibodies in the serum of women with breast cancer. Separately, another study revealed that the HHV-8 virus had a frequent presence in patients' tissues, where it is detect by the EBV method [11]. Other researchers said that the HHV-8 virus had a strong positive association with breast cancer and that its presence was directly proportional to the progression of the disease and the spread of the tumor to nearby lymph nodes [12]. The seropositivity of HHV-8 is different with age-explicit gatherings. As opposed to a few epidemiological examinations did in various locales that have recorded high paces of HHV-8 with advancing age[13,14], this might be identified with an uneven appropriation over the populace in different land zones, and that the pediatric age gatherings were avoided on the grounds that every one of the members were grown-up women[15]. The examination results are bolster by an investigation did in Uganda demonstrating a huge decrease in the pervasiveness of HHV-8 with an expanding age among women [16]. The present examination demonstrates a modestly critical relationship concerning HHV-8 antibodies among the ladies with bosom malignancy in connection to age, which might be credited to the unsettling influences in their immunological reactions, notwithstanding the expanded pressure prompting the reactivation of quiet HHV-8 diseases or encouraging new HHV-8 contaminations. The present examination uncovered a high level of ductal carcinoma when contrasted and different kinds of bosom disease, and that the vast majority of the patients were in

stage II. Comparative outcomes were acquired from the Iraqi national bosom disease explore unit documents [17]. The blood transfusion history showed a positive association with the HHV-8 serostatus among the immunocompromised beneficiaries. One conceivable speculation is that in influenced nations there exists a functioning viral flow, intense diseases with lytic viral replication, and higher blood viral burdens. Despite what might be expected, in non-endemic areas, sound immunocompetent people who are HHV-8 seropositive may harbor dominatingly dormant HHV-8 tainted cells that would not experience lytic replication except if presented to explicit upgrades. By and by, if both the lytic and dormant cycles happen simultaneously, the viral burden might be low and every now and again underneath the discovery edge. Additionally, there might be an absence of a leukodepletion convention in the blood segments in the blood donation center procedure, except if it is demonstrated for sure in danger patients [18,19].

5. Conclusions

It is conclude that there is significant association between HHV-8 infection and occurrence of breast cancer and high rate of this infection is relate to metastasis.

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Assessment of Occupational Hazards on Nurses Performance Who Working in the Operative Room at Kirkuk's Hospitals

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ABSTRACT

Design of the study: Quantitative design (convenience study) was conducted for nurses from 3rd of October, 2018, up to the 1st of May, 2019 to evaluation of factors that impact female .nurses job performance at Kirkuks hospitals

Setting of the study: The present study was conducted at Kirkuk General Hospital and Azadi .teaching hospital and Pediatric hospital

Sample of the Study: A non-probability (purposive) sample of (60) nurses who working in .above mentioned hospitals

Tools of Data Collection: all through a wide-spread related literature's review, a questionnaire was articulated to conduct a research using a technique of interview. Generally, twenty two items were incorporated in this questionnaire. Thus, the questionnaire comprised of five portions; socio-demographic data, health hazards, physical hazards, chemical hazards and .biological hazards

Methods of data collection: The data were collected through the utilization of constructed questionnaire, interview technique with the nurses toward the factors that impact their performance in the hospitals. The data collection process was performed from the period of 1st November, 2018 up to the 15th of January, 2019. Consent informed was granted from nurse for participation in the present study was obtained and the interview was carried out .individually

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Statistical analysis: The analysis of data was carried out with the assistance of descriptive statistical data analysis methodology that consists of mean of score, percentages, grand score .mean and frequencies

Results: The result of the study showed that most of the sample were(20-30) years old., college graduate, (1-5) years of employment, married, working in the Operation room, working only in morning shift, working (21-25) days monthly, have (6) hours' working daily, have barely sufficient monthly income.

Keywords: Occupational Hazards, Nurses Performance, Operative Room.

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تقييم المخاطر المهنية على أداء الممرضات العاملات في غرفة العمليات في مستشفيات كركوك

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الملخص

تصميم الدراسة: اجريت التصميم الكمي (دراسة ملائمة) للممرضات من 3 أكتوبر 2018 ، وحتى 1 مايو 2019 لتقييم العوامل التي تؤثر على الأداء الوظيفي للممرضات في مستشفيات كركوك

مكان الدراسة: أجريت هذه الدراسة في مستشفى كركوك العام ومستشفى آزادي التعليمي ومستشفى الأطفال

عينات الدراسة: عينة (احتمالية) غير مرجحة لـ (60) ممرضة تعمل في المستشفيات المذكورة أعلاه.

أداة جمع البيانات: من خلال مراجعة مستفيضة للأدبيات ذات الصلة ، تم تصميم استبيان لغرض الدراسة مع تقنية المقابلة. عدد البنود المدرجة في الاستبيان كانت (22). يتكون الاستبيان من خمسة اجزاء : البيانات الديموغرافية الاجتماعية ، المخاطر الجسدية على أداء الممرضين، المخاطر البيولوجية على أداء الممرضين، المخاطر الكيميائية على أداء الممرضين، و المخاطر الصحية على أداء الممرضين

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طرق جمع البيانات: تم جمع البيانات من خلال استخدام الاستبيان المركب (المبني) ، أسلوب المقابلة مع الممرضات تجاه العوامل التي تؤثر على أدائهم في المستشفيات. تم إجراء عملية جمع البيانات من الفترة من 1 نوفمبر 2018 حتى 15 يناير 2019. تم الحصول على الموافقة المسبقة من الممرضات للمشاركة في هذه الدراسة وتم إجراء المقابلة بشكل فردي.

التحليل الإحصائي: تم تحليل البيانات من خلال تطبيق منهج تحليل البيانات الإحصائية الوصفي الذي يشمل التكرارات والنسب المئوية والمتوسط الحسابي والوسط الحسابي الكبير.

النتائج: أظهرت نتائج الدراسة أن معظم العينة كانوا (20–30) سنة ، خريج جامعي ، (1–5) سنوات من العمل ، متزوج ، يعملون في غرفة العمليات ، يعملون فقط في نوبة الصباح. ، العمل (21–25) يومًا شهريًا ، (6) ساعات عمل يوميًا ، بالكاد دخل شهري كافٍ.

الاستنتاجات: استنتجت الدراسة إلى أن الممرضات لم يتعرضوا لمخاطر الجسدية و المخاطر الكيميائية، في حين كانت نسبة تعرضهم للمخاطر البيولوجية والصحية عالية.

الكلمات الدالة: الأخطار المهنية ، أداء الممرضات ، غرفة العمليات.

1. Introduction

An occupational (work-related) menace is termed as an experience of hazard at workstation. There are several kinds of the occupational hazards containing psychosocial hazards, biohazards (biological), physical and chemical hazards. The occupational sickness is any sort of chronic illness that befalls as a consequence of the job-related actions. This represents as a feature of occupational health and safety. Therefore, an occupational ailment is normally acknowledged when it is revealed to be more widespread in the worker's body as compared to the overall population or in populations of other workers (DiBenedetto, 2015).

The occupational hazards indicates both short term & long term dangers related to the environment of work field. It is an area of study in the occupational health, security & public health as well. Long term risks might advance the development of heart and cancer diseases whereas, short term risks might contain physical harm (Fuortes, L et al., 214).

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OSH (Occupational Safety & Health) concerns are a significant measure of management of quality, CSR (corporate social responsibility) and risk management. Thus, in this prospect, the features of OSH must be an assimilated element of entire procedures of managerial developments for instance, development of organizational, human resources and corporate strategy (Garrett, B, et al., 2012).

Operation Theater (OT) is a specified domain in which inexperience or insufficient security measures might be a basis of several threats which can upset both the operating team and patient. Thus, acknowledgement of such probable dangers by continuous caution and awareness can take control of the environment of OT while making it safe (Hellman, S and Gram, M, 2013).

The atmosphere of Operation Theater is at risk of numerous inherent dangers. Accordingly, the team of professionals & patient for surgical procedure might face innumerable exposures which can be categorized as fire hazards, accidental or physical hazards, biological & chemical hazards as well as other hazards i.e. atmospheric, psychological & organizational threats. Insufficient measures of safety consequently can cause several deleterious impacts (Hudson, P and Vogt, R, 2008).

Relentless attentiveness, preservation of a definite operative practice, mindfulness by means of timely intercession and culture of an accomplished team can create an innocuous environment of OT for team and patients as well. Thus, the purpose of this article is to recognize & classify the menaces occurring during the surgery in OT, associated safety precautions taken for the well-being of patients & operating team that have a right to be treated with reverence & dignity (Levy, B, et al., 2010).

Methodology

A quantitatively designed convenience research was steered for nurses from the October 3rd, 2018, up to the 1st of May, 2019 to assessment effect of occupational hazards on nurses' performance at operative room .

Setting of the study the present study was conducted at Kirkuk General Hospital and Azadi and Pediatric hospital teaching hospital .

The sample of the Study

A non-probability (purposive) sample of (60) nurses who

Working at operation room in Kirkuk General Hospital, Azadi teaching hospital and Pediatric hospital. According to following criteria

-1Male and female nurses only

-2All level of education

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-3All surgical units

Tools of Data Collection

The broad review of the related literature indicated that current questionnaire was created in order to carry out the research with the technique of interview. Inclusively, all the 22 items were calculated with two scale ratings, yes (2), No (1) the questionnaire consists of two parts-:

Part I: -Socio-Demographic data

It is made up of ten items which epitomize the socio-demographic distinguishing data of nurses for example level of education, age, duration of experiences, Marital Status, place of work, number of night shift monthly, number of working days in hospital per month, number of working hours per day, shifting time, monthly income .

Part II: Physical Hazards

This part was concerned with the physical hazards that may happened to nurses in side to operation room and composed of (8) items .

Part III: Biological Hazards

This part was concerned with the biological hazards that may happened to nurses in side to operation room and composed of (4) items .

Part IV: Chemical Hazards

This part was concerned with the chemical hazards that may happened to nurses in side to operation room and composed of (5) items .

Part V: Health Hazards

This part was concerned with the Health hazards that may happened to nurses in side to operation room and composed of (6) items.

2. Results and Calculations

Table (1): Age of the samples

NO	Age	F	%
1	Less than 20 years	1	1.66
2	20-29	29	48.33
3	30-39	17	28.33
4	40-49	8	13.33
5	50-59	5	8.33
Total		60	100

Table 1 indicates the age of 48.33% of samples as 20- 29 years old whereas, 1.66% .sample showed less than 20 years of age

Ratner and Sawatzky (2009) declared the nurses' average age a universal concern due to the rising shortage of nursing. The exceeding demand of nurses than that of supply all over

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the world specifically influences the highly intricate spaces for instance OR (Operating .Room) that require particular expertise to take care of patients

Clark and Clark (2003) stated that frequently the dazzling interpretation of OR nursing causes the young nurses to select OR as their career. Therefore, the way to detour such an imprecise picture is to provide students with an opportunity to visit OR as a preceptor's .shadow

Rogers, et al., (2009) specified the nurses' shortage which is intensified through the workforce of aged nursing as the most of registered nurses (RNs) are of the age of more than 45 years. The RNs' revenue rate in US is estimated to extend to a 20% of per year mean in 2010. Additionally, the rate of nurses' retirement has hastened. Thus, it has been anticipated that there should be struggles made to prevent nurses from retiring.

Table (2): level of education of the samples

	Level of education	F	%
1	Preparatory school graduate	17	13.33
2	Institute graduate	21	35.0
3	College graduate	22	36.66
Total		60	100%

%36.66 of the college graduate's samples as well as preparatory school graduate as (13.33%) are also presented in table 2 .

O'boyle, et al., (2006) the areas of specialty like perioperative surgery aren't presently incorporated in the undergraduate studies, disparate to the programs of diploma which fully train the nurses in all specialties in a clinical setting.as assessment indicates about 20% of the recently hired in the specialty area of perioperative would retire in subsequent five years .

The study supported by Rogers, (2004) who mentioned that most of the contestants such as 71.9% had a degree of bachelors, 7% held a masters' degree, 8.1% comprised of a degree of graduate diploma while 13% had a degree of 3 years diploma. This outcome is unreliable to the literatures that concentrated on the significance of the nurses' educational level as it determined their duties to carry out several roles.

Table (3): Years of employment of the nurses

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	Years of employment	F	%
1	Less than one years	4	6.66
2	1-5	27	45.0
3	6-10	15	25.0
4	11-15	7	11.66
5	16-20	7	11.66
6	More than 21	0	0.0
Total		60	100%

In Table 3, 45% of samples signifies the (1-5) years of employment, while (6.66%) of them .have less than one years of employment in the operation room

Jackson, and Linda (2016) mentioned those means with which an individual registered due to the regularity of nurse as well as the country's registering authority. The training of professional nurses is carried out at the level of higher education along with a 3 to 4 years of period of training or more. Thus, professional nurses are acknowledged as registered nurses .functioning in educational organizations, nursing & clinical services

Kanfer, et al., 2011, stated that there are a few studies which have addressed health workers motivation in Iran. Their studies aimed to find out the ranking importance of motivational factors based on demographic characteristics correlation between motivational factors, identifying the factors affecting motivation in the employees of social security hospitals in Mazandaran in northern Iran.

Table (4): Sample's marital status

	Marital status	F	%
1	Single	19	31.66
2	Married	38	63.33
3	Separated	2	3.33
4	Divorced	1	1.66
Total		60	100%

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Table (4) shows that (63.33%) of the sample were married, while (1.66%) percentage of the .samples were divorced

The study agree with Sullivan & Decker (2009) who confirm that an additional persuasive biographic variable which might compromise the job satisfaction is the employees' marital status. Though, there is an absence of abundant studies to draw conclusions regarding the impact of nurses' marital status on the job satisfaction. However, inadequate research steered in this expanse constantly designates the married employees are more content with their jobs in comparison to their unmarried associates. Which might be because of the reason that marriage inflicts enlarged responsibilities which can turn a stable job more essential and valuable as to have a steady job, one must have a job satisfaction.

Table (5): Place of work of the samples

	Place of work	F	%
1	Surgery operation	38	63.33
2	Premature operation	2	3.33
3	Eye operation	1	1.66
4	Gynaecological operation	8	13.33
5	Crash operation	3	5
6	Urinary tract operation	6	10
7	ENT Operation	2	3.33
Total		60	100%

The Table 5 expresses the 63.33% of sample working in the surgery operation room, while .(3.33%) of them were working in the ENT operation room

The "OR" or perioperative nurse is a distinct person who prep the patient for surgery, works for the interdisciplinary care team and family of the patients. The OR nurse supports to assess the patient, after that plan & implement several footsteps to, all through & after the surgery. Thus, nurses who relish the direct care of patients as well as the upright covenant of .(adjustment can appreciate the time being spent at OR (Aiken, et al., 2012

The positions for perioperative nurse need an acclaimed license of RN from applicant. This can be accomplished upon the completion of a minimum of Associate's Degree in Nursing

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(ADN) two years program. There is no need for a BSN for all of nurse positions at operating room, though, it is desired by the managers. Approximately, some proprietors might hire after that the candidate decides to complete his/her degree of bachelors in a given timeframe. Thus, the vacancies of the perioperative nursing are normally open to the novel RNs graduates upon a successful completion of an internship program and to the qualified nurses having least 1 year bedside experience as well (McGibbon et al., 2010)

Table (6): Work shift of the nurses

	Work shift	F	%
1	Morning shift only	**52**	**86.66**
2	Evening shift only	**6**	**10**
3	Night shift only	**2**	**3.33**
Total		**60**	**100%**

Table 6 specifies that (88.667%) of the sample have working only in morning shift, while .((3.33%) of the sample taken (night shift

Crofts, (2009) observed that being diurnal humans perform functions during day time while have a difficulty working with a night shift. Thus, night workers reported numerous health related issues and added grafts indicated that these negative impacts will have concerns not only the person but for the work station as well. Because diminished attentiveness and lessened performance in job can threaten the lives of humans and impact the care quality at .unit of intensive care

Page (2004) indicated that night shift can disturb the performance of nurses and satisfaction of patients for instance, night shift nurses or shift rotators make more mistakes as compared to the other shift nurses which is because of the exhaustion. Further, the risks of making errors can upsurge 2 to 3 times when nurses work successively for 12.5 hours or more.

Table (7): Number of night shift of the samples per month

	Number of Night shift	**F**	**%**
1	**Have not taken night shift**	**34**	**56.66**
2	**1-2**	**8**	**13.33**
3	**3 – 4**	**4**	**6.66**
4	**5 – 6**	**1**	**1.66**

5	**7 – 8**	**13**	**21.66**
Total		**60**	**100%**

of the sample have not taken night shift, while 1.66% of the sample taken (3-4) night %56.66 .shift per month as indicated in table 7

Ohida, et.al. (2001) inspected the effect of night, afternoon, day & rotating shifts on the stress & performance of nurses. The conclusions designated that satisfaction and performance of job was found to be smaller for rotating roaster as compared to the fixed roster. Though, nursing studies have been changing but still there is an overall lack of research which tries to link the insights of night time responsibilities to the satisfaction of work & then to the turnover of staff eventually.

Table (8): Number of working days per month.

	Number of working days	F	%
1	**10 – 20**	**23**	**38.33**
2	**21 – 25**	**29**	**48.33**
3	**26 - 31**	**8**	**13.33**
Total		60	100%

In table 8, it has been specified that (48.33%) of the sample working (21-25) days monthly, .while (13.33%) of the sample working (26-31) days monthly

Hong Lu, et al, (2004) mentioned that the nursing performance level might be impacted through following yet without limiting to; support of manager, training and education development, resources' availability, work of night shift and work load of organizational factors finally disturb the organizational mission, vision, satisfaction of patients and situations of health care in Palestine. Almost, some factors are recognized & designated for evaluating their outcomes on the actions of nurses. Thus, such factors were chosen centered on the former researches. Further, their literature reviews were observed to be more concentrated on these factors, additionally, to the Palestine's political conditions which play a great role in such factors like dependence on the international support and health insurance demand as well.

Table (9): Number of working hours per day of the samples

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	Work hours	F	%
1	**4 hr**	**2**	**3.33**
2	**5 hr**	**1**	**1.66**
3	**6 hr**	**27**	**45**
4	**7 hr**	**15**	**25**
5	**8 hr**	**14**	**23.33**
6	**12 hr**	**1**	**1.66**
Total		60	100%

of the sample have (6) hours' working daily, while (2.2%) of the sample have (18) (%45.0) .hours' working daily as designated in table 9

Institute of Medicine, (2004) stated that investigators continuously determine a relation amongst nurse fatigue, working hours & errors along with doubling of the rate of errors at the ten working hours while tripling at sixteen hours (Rogers, et.al 2004). Sometimes, fatigue is categorized by reduced capacity of work completion and individual's complaint about feeling exhausted. Insufficient break, loss of sleep and schedules of working shift sometimes add to the weariness.

Table (10): Monthly income of the samples.

	Monthly income	F	%
1	**Sufficient**	**7**	**11.66**
2	**Barely sufficient**	**30**	**50**
3	**Non sufficient**	**23**	**38.33**
Total		60	100%

Table (10) shows that half (50.0%) of the sample have barely sufficient monthly income, .while (11.66%) of the sample have sufficient monthly income

Ofili, et al., (2004) indicated that rendering to the Bureau of Labor Statistics, the roles of the perioperative nursing are anticipated to escalate up to the 19% following decade in even though due to the emphasized preventive care. Although, the rates of employment growth diverge all over the country. When located near to the teaching facilities and busy hospitals, it means greater rates for the opportunities of perioperative field as well as room availability for .progression for the contrasting the regions which are less urban

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Gropelli & Corle (2011) declared the operating room nurse's median salary as $66,713 having a range of $49,419 to $ 93, 569. Moreover, salary is affected by the certificates, experience, .location and education

Luksami, et al., (2001) stated that your location such as the regions which are most heavily occupied inclined to produce more income, type of industry you're like profit, non-profit or government, experience level such as experienced nurses earn more money are all the factors that affect one's salary. Moreover, the registered nurses might face substantial competition when considering for jobs in outpatient care centers or in offices of physicians. This is due to the fact that all these places normally offer more relaxed environment or workstation, week day hours or regular working hours.

Table 11: Physical Hazards

	Items	Yes		No		Ms.	S
		F	%	F	%		
1	Cuts	16	26.6	44	73.3	1.26	MS
2	Pricks	18	30	42	70	1.30	MS
3	Electrical shocks	14	23.3	46	76.6	1.23	MS
4	Burns	26	43.3	34	56.6	1.43	MS
5	Scalpel	16	26.6	44	73.3	1.26	MS
6	Laser	6	10	54	90	1.10	MS
7	Head injuries	10	16.6	50	83.3	1.16	MS
8	Slips and falls	25	41.6	35	58.3	1.41	MS
	Grand mean of scores					1.26	MS

Table (11) shows that samples has moderate mean of score in all items. Furthermore, the study exposed that the score's grand mean was moderately substantial. Such occupational dangers accompanied with several other difficulties for instance, sleep deprivation & night shifts have turned this occupation into a hazardous one which might elucidate the higher rates .(of preventing the nursing work (Wong, et al., ,2010

Commonly, nurses face multiple physical threats while performing their responsibilities. Thus, the protection of nurses their selves and successively of their patients relies straightly on the grade at which they have awareness of the workplace risks precise to their jobs and .(administrative mechanisms to cope up with those dangers (Memish, et al., 2013

The proportion of the occupational damage & ailment in healthcare settings for nurses was observed to be of 8.6%/100 full time employees in which 18.2% were accountable for wounds. Thus, this rate was greater as compared to the lethal professions for example mining having a rate of total 7.5% per 100 full time labors and heavy construction sites in which risk rate for occupational injury observed is 13.8%/100 full time workforces (Nolan, C., & Rosenberg, 2014).

Table 12: Biological Hazards .

	Items	Yes		No		Ms.	S
		F	%	F	%		
1	Blood	44	73.3	16	26.6	1.73	HS
2	Sputum	25	41.6	35	58.3	1.41	MS
3	Vomits	18	30	42	70	1.30	MS
4	Other body fluids	36	60	24	40	1.60	HS
	Grand mean of scores					1.51	HS

d in t Table (11) shows that samples has high mean of score in items blood and item other .body fluids, Moreover, the study revealed a significantly higher score's grand mean

Peterson, et al., (2015) identified the presence of the infections' possibility not only in hospitals rather in other settings of nurse's employment like outpatient facilities (dialysis centers), nursing homes, workplace health centers, prisons, community health clinics and institutions for retarded. Moreover, the higher risk zones in hospitals comprise of infectious .disease ward, ambulatory care facilities, emergency rooms and pediatric areas

McVicar, A., (2003) declared that transmissible & infectious sicknesses as well as the contact to the blood borne pathogens (HBV, HIV and HCV) because of the needle stick wounds are also menace for the nurses' health. An estimation shows that about 60,000-80,000 of the needle stick injuries happen every year in healthcare settings altogether. Thus, the suturing .(17%), drawing blood (16%), and injections (21%) are the major exposure reasons

Health care personnel are most probable to go through occupational injuries in comparison to the other professions. The nurses in emergency ward recurrently come across work linked dangers in their day to day routines. Possible aspects for the nonviolent work station wounds

in nurses consists of aging of nursing workforce, heavy work load and other environmental factors of the place of work like nonstandard schedules of work and obesity. Thus, all this factors affect the decision making powers of the nurses concerning either to return or not to their occupation or to stay at their desired practice field. Therefore, these intensify the deficiencies of workforce while obstructing the efforts of retention and recruitment (Kilpatrick A, et al., 2003).

Table 13: Chemical Hazards.

	Items	Yes		No		Ms.	S
		F	%	F	%		
1	Anesthetic gases	31	51.6	29	48.3	1.51	HS
2	Disinfectants	32	53.3	28	46.6	1.53	HS
3	Drugs that are used during chemotherapy	13	21.6	47	78.3	1.21	MS
4	There are elements	12	20	48	80	1.2	MS
5	Other cleaning and sanitizing agents	42	70	18	30	1.7	HS
	Grand mean of scores					1.43	MS

Table (11) shows that samples has high mean of score in items Anesthetic agents, disinfectant, and other cleaning and sanitation agents. Moreover, the study revealed moderate grand mean of score

Other precarious sources for nurses are the chemical materials. Thus, sterility products & disinfectants including ethylene oxide & glutaraldehyde, several dangerous drugs utilized in chemotherapy as well as latex exposure are the workplace risks for the nurses (12). Thus, the five nurses who specifically work in emergency department continually experience greater job violence rates. Rendering to a research through ENA (emergency nurses association) in 2011, about 53.4% nurses reported the cases of facing verbal abuse while 12.9% which are greater (than 1 in ten nurses suffered from the physical ferocity (Schaufeli W& Greenglass, 2001

In the clinical settings, various antineoplastic agents might be organized & directed. Thus, a great amount og research have acknowledged the dangers of the cytotoxic medications to the .(working nurses who deal those medicines (Karasek and Theorell, T, 2009

Moreover, the ethylene oxide is normally utilized in hospitals for the sterilization of heat sensitive substances and medical equipment. This might come across the central supply,

patient care regions and surgical services. This is renowned that such agent owns teratogenic, mutagenic and carcinogenic properties. Thus, it is also related to the effects of chemical .(burns, central nervous system and respiratory tract irritation (Barker & Nussbaum, 2011

Nurses are potentially exposed to the formaldehyde while working in the units of renal dialysis as well as for the period of tissue transfer to formalin for preparing or as a remainder when it is utilized to disinfect the ORs. Thus formaldehyde is correlated to the occupational asthma, eye irritation, allergic dermatitis and irritant because it is thought to be a potential .(human carcinogen (Lee, W, et al., 2011

Purpora, C., et al., (2012) stated that nurses who perform cold sterilization. Exposures are associated to the exercising the soaking of apparatuses in exposed containers devoid of the local exhaust ventilation advantage throughout the instrument's manual cleaning. Hence, .being irritant to the mucous membrane and skin, this may be a source of the skin sensitivity

Schoenfisch, et al., (2013) declared that healthcare surroundings involve the usage of several instruments having elemental mercury. The utmost chance of the exposure happens due to the thermometer's glass part breakage of sphygmomanometer while leaking the mercury on countertops or floor. Moreover, the higher levels of exposures can lead to the acute poisoning or even to death. Whereas, the short term higher exposures can be a reason of the damage of central nervous system and pulmonary impairment. Employees can carry mercury to their home with their clothes or shoes while exposing other family members.

Table 13: Health Hazards.

	Items	Yes		No		Ms.	S
		F	%	F	%		
1	Musculoskeletal pain	44	73.3	16	26.6	1.73	HS
2	Fatigue	44	73.3	16	26.6	1.73	HS
3	Spinal misalignment	33	55	27	45	1.55	HS
4	Disc degeneration	18	30	42	70	1.3	MS
5	Stress	38	63.3	22	36.6	1.63	HS
6	Communicable diseases	29	48.3	31	51.6	1.48	MS
	Grand mean of scores					1.57	HS

f WBP interac Table (11) shows that all the samples has high mean of score excepts the item (Disc degeneration and communicable disease). Furthermore, the study revealed a high mean .of score as a grand mean of score

Nurses are threatened by a latent disclosure of radiations, infectious diseases, back injuries and toxic substances. Thus, they are also prone to the damages like workplace violence, shift work and stress. Thus, these usually come under the classification of psychological, physical, .(biological and chemical threats (Holman, et al., 2010

Smith, et al., (2004) listed that nurses might caught infectious sicknesses like rubella, mumps, influenza and measles. Thus, the determination of immune status must be practical for workers who have the responsibilities of patient care and suitable immunizations ought to be .presented

The injury of back occupies a 2nd rank amongst the entire reasons of occupational injuries for all kinds of professions. Reports indicated that about annually 40,000 of the nurses get back associated injuries. The most common bases of the back pain comprised of the activities like transferring patient from bed, helping them out of bed, lifting patient on bed & carrying .(30 pounds or greater weight instruments (Josephson, et al., 2007

The nursing work forces of the hospitals interpret back injuries more than half of the total recompense payments for back damage. Further, an estimation specified about larger than 764,000 absent work days are sustained every year. The actions achieved by nurse recruits at the protracted care services put them at huge risks of back problems. Repeated lifts & supports to weak, elderly & incapacitated patients escalates the chances of back issues for the care takers. Most recurrently influenced by such kind of injury are the licensed practical .(nurses and registered nurses (Mehrdad, et al., 2010

The research study related to the reimbursement data of the employees designated the ranks of nurse supporters as 5th while LPN to 9th between all professions in workstation back problems in filing. The lower back injury occurrence were observed to be higher as compared to those of nurse. The researches have highlighted that freshly qualified trainees & nurses are at higher back injury risk as compared to the experienced ones. Further, possible risk aspects of the back injury involve shift (highest risks for evening shifts), nurses' weight (raised pressures of intra-vertebral discs, lumbar lordosis' development is affected by additional

weight & poor tone of muscle) and gender as female have greater incidence rates (Fujishiro, .(2005

Conferring to the national survey in US related to the occupational hazards, the occurrence rate of the ailment & occupational injury for healthcare and medical industry was observed to be higher as 6.6% while being ranked as 4th of the fifty sixth of the service industries. Further, when related to the workers of other industries, the healthcare staff testified more occurrences of the eye diseases, toxic hepatitis, infectious disease, flu, psychological .(disorders, dermatitis, back strain and infectious hepatitis (Malone, R, 2015

The nurses working with incurably & recurrently sick patients as well as nurses who work in emergency rooms, operating rooms, burnt units and intensive care units are at a precise risk of anxiety connected indications. The primary symptoms of the stress comprise of ulcers, sleep deprivation, emotional instability, irritability, appetite loss and migraine headaches (Pinkerton, et al., 2004).

3. Conclusion

. - (48.33 %) of the samples age were (20-30) years old

.of them were college graduate (%33.6) -

of them have (1-5) years of employment (%45.0) -

of the sample were married (%63.33) -

of them sample working in the Operation room (%63.33) -

of the sample have working only in morning shift (%88.6) -

of the sample Have not taken night shift (% 55.66) -

.of the sample working (21-25) days monthly (%48.33) -

of the sample have (6) hours' working daily (%45.0) -

of the sample have barely sufficient monthly income (%50) -

- The study concluded that the nurse have low risk factors at physical and chemical hazards, while their risk is high regarding biological and health hazards.

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Evaluation of Factors that Impact Female Nurses Job Performance at Kirkuk Hospitals

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ABSTRACT

Back ground:The performances of the nurses are especially important in accomplishing health .care in a continuous and effective way

Aim: The study aims to assess Factors that Impact Female Nurses Job Performance at Kirkuk Hospitals

Design of the study: Quantitative design (convenience study) was conducted for nurses from 3rd of October, 2018, up to the 1st of May, 2019 to the evaluation of factors that impact female nurses job performance at Kirkuks hospitals

Setting of the study: The present study was conducted at Kirkuk General Hospital and Azadi .teaching hospital and Pediatric hospital

Sample of the Study: A non-probability (purposive) sample of (90) samples that work in the .above mentioned hospitals

Tools of Data Collection: Through extensive review of relevant literature, a questionnaire was constructed for the purpose of the study with an interview technique. Overall items included in the questionnaire were (26). The questionnaire consists of two parts Socio-Demographic .data and Part II: Factors Impact Female Nurses Job Performance

Methods of data collection: The data were collected through the utilization of constructed questionnaire, interview technique with the nurses toward the factors that impact their performance in the hospitals. The data collection process was performed from the period of 1stNovember , 2018 up to the 15th of January, 2019. Consent informed was granted from nurse for participation in the present study was obtained and the interview was carried out individually

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Statistical analysis:Data were analyzed through the applicationof descriptive statistical data analysis approach which includes frequencies, percentages, mean of score, and grand mean .of score

Results:The results of the study showed that most of the sample were(20-30) years old., college graduate, (1-5) years of employment, married, working in the Operation room, working only in morning shift, working (21-25) days monthly, have (6) hours' working .daily, have barely sufficient monthly income

Conclusions: The study concluded that the nurse job performance are affected by many factors according to the grand mean of score revealed in the results.

Keywords: Evaluation, Nurses Job Performance.

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تقييم العوامل التي تؤثر على الأداء الوظيفي للممرضات في مستشفيات كركوك

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الملخص

تصميم الدراسة:اجريت التصميم الكمي (دراسة ملائمة) للممرضات من 3 أكتوبر 2018 ، وحتى 1 مايو 2019 لتقييم العوامل التي تؤثر على الأداء الوظيفي للممرضات في مستشفيات كركوك

مكان الدراسة:أجريت هذه الدراسة في مستشفى كركوك العام ومستشفى آزادي التعليمي ومستشفى الأطفال

عينات الدراسة:عينة (احتمالية) غير مرجحة لـ (90) عينة تعمل في المستشفيات المذكورة أعلاه.

أداة جمع البيانات:من خلال مراجعة مستفيضة للأدبيات ذات الصلة ، تم تصميم استبيان لغرض الدراسة مع تقنية المقابلة. عدد البنود المدرجة في الاستبيان كانت (26). يتكون الاستبيان من جزأين: البيانات الديموغرافية الاجتماعية والجزء الثاني: العوامل المؤثرة في أداء الوظيفي للممرضات.

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طرق جمع البيانات:تم جمع البيانات من خلال استخدام الاستبيان المركب (المبني) ، أسلوب المقابلة مع الممرضات تجاه العوامل التي تؤثر على أدائهم في المستشفيات. تم إجراء عملية جمع البيانات من الفترة من 1 نوفمبر 2018 حتى 15 يناير 2019. تم الحصول على الموافقة المسبقة من الممرضات للمشاركة في هذه الدراسة وتم إجراء المقابلة بشكل فردي.

التحليل الإحصائي:تم تحليل البيانات من خلال تطبيق منهج تحليل البيانات الإحصائية الوصفي الذي يشمل التكرارات والنسب المئوية والمتوسط الحسابي والوسط الحسابي الكبير.

النتائج:أظهرت نتائج الدراسة أن معظم العينة كانوا (20–30) سنة ، خريج جامعي ، (1–5) سنوات من العمل ، متزوج ، يعملون في غرفة العمليات ، يعملون فقط في نوبة الصباح. ، العمل (21–25) يومًا شهريًا ، (6) ساعات عمل يوميًا ، بالكاد دخل شهري كافٍ.

الاستنتاجات: استنتجت الدراسة إلى أن الأداء الوظيفي للممرضات تأثر بالعديد من العوامل وفقًا لمتوسط الدرجات الكبير الذي تم الكشف عنه في النتائج.

توصيات: بناءً على استنتاجات الدراسة الحالية ، يمكن التوصية بما يلي: توفير بيئة جيدة تعمل على تحسين الأداء الوظيفي ، ووضع آلية للمكافآت الممرضات لتحفيزهم على زيادة كفاءة العمل ، وتوفير عدد كافٍ من موظفي التمريض ، وزيادة المخصصات المالية لموظفي التمريض.

الكلمات الدالة: التقييم , الاداء الوظيفي للممرضات, العوامل المؤثرة.

1. Introduction

Historically, women have made up a large majority of the profession and academic discipline of nursing (Levine E, and Levine M,2016). Women's nursing roles include both caring for patients and making sure that the wards and equipment are clean. Currently, females make up the majority of the field of nursing. Statistics show that in 2005, "women comprised 92.3% of Registered Nurses (RNs). Additionally, registered nurses are projected to create the second largest number of new jobs among all occupations between 2004 and 2014, increasing by 29.4% (Haig, K , et al., 2006).

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Nurses in the past were required to work long days and care for many patients, for very little pay. In addition, the typical university setting where nurses learned the work of the trade was not in existence back then. Instead, nurses learned the trade while working in the field.(Hollingsworth et al., 2008).

Nurses develop a plan of care, working collaboratively with physicians, therapists, the patient, the patient's family and other team members, that focuses on treating illness to improve quality of life. In the United States and the United Kingdom, advanced practice nurses, such as clinical nurse specialists and nurse practitioners, diagnose health problems and prescribe medications and other therapies, depending on individual state regulations (Smedley, et al., 2007)

Nurses may help coordinate the patient care performed by other members of a multidisciplinary health care team such as therapists, medical practitioners and dietitians. Nurses provide care both interdependently, for example, with physicians, and independently as nursing professionals(Daraiseh, et al., 2013).

2-Methodology:

A quantitative design (convenience study) was conducted for nurses from 3rd of October, 2018, up to the 1st of May, 2019 to evaluation of factors that impact female .nurses job performance at Kirkuk`s hospitals

Setting of the study

The present study was conducted at Kirkuk General Hospital and Azadi teaching hospital

The sample of the Study

A non-probability (purposive) sample of (90) samples that

Work in the above mentioned units at Kirkuk General Hospital, Azadi teaching hospitalaccording to following criteria

1-Female nurses only

2-All level of education

Tools of Data Collection

Through extensive review of relevant literature, a questionnaire was constructed for the purpose of the study with interview technique. Overall items included in the questionnaire were (26) items (Appendix A and B).All items were measured -:on two rating scale, yes (2), No(1) The questionnaire consists of two parts

Part I: -Socio-Demographic data

It is composed of (10) items that represent the nurses socio-demographic characteristic data such as age, level of education,Duration of experiences, Marital Status, place of work, number of night shift monthly, number of working days in hospital per month, number of .working hours per day, shifting time, monthly income

Part II:Factors Impact Female Nurses Job Performance

This part was concerned with the factors impact female nurses job performance and composed of (26) items.

2. Results and Calculations

Table (1): Age of the samples

NO	Age	F	%
1	Less than 20 years	2	2.2
2	20-29	70	77.8
3	30-39	15	16.6
4	40-49	1	1.2
5	50-59	2	2.2
Total		90	100%

Table (1) shows that (77.8%) of the sample age were (20-30) years old, while (1.2%) of the sample were(40-49) years old.

According to Dean, et al (2006) aging may also play a role when assessing the effects of sleep deprivation on performance. There is evidence to suggest that the aging process increases the physiological and cognitive effects of fatigue. Recent laboratory studies documented a decrease in performance in older workers on the night shift compared to a younger worker

Bhabra, et al., (2007) stated that there is a shortage of nurses. This is exacerbated by an aging nursing workforce, in which the majority of RNs are more than 45 years of age. The turnover rate for RNs in the United States is expected to reach a mean of about 20% per year in 2010. In addition, nurses are retiring at an accelerating rate, and it has been proposed that efforts should be made to retain nurses who are approaching retirement.

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Table (2): level of education of the samples

	Level of education	F	%
1	Preparatory school graduate	23	25.5
2	Institute graduate	23	25.5
3	College graduate	44	49.0
Total		90	100%

Table (2) shows that (49%) of the sample were college graduated, while preparatory school graduate and Institute graduate were (25.5%).

The study supported byRogers, (2004) who mentioned that majority of participants (71.9%) had a bachelor degree, (13%) had a diploma three years degree, (8.1%) have post graduated diploma degree, (7%) had a master degree. This result is inconsistent with the literatures that focused on the importance of the educational level for nurses because it determines their responsibilities for performing the various roles.

According to Taylor, et al (2011) found that there is a relationship between registered nurses and the quality of nursing outcome, decreasing mortality rate, decreasing complications, and infection among nurses. However, the researcher found that there were no significant differences at the level of α=0.05 between the means of selected organizational factors affecting professional nurses performance at north west bank governmental hospitals which might be attributed to academic degree of participants.

Table (3): Years of employment of the nurses

	Years of employment	F	%
1	Less than one years	25	27.7
2	1-5	45	50.0

3	6-10	15	16.6
4	11-15	2	2.2
5	16-20	1	1.1
6	More than 21	2	2.2
Total		90	100%

Table (3) shows that (50%) of the sample have (1-5) years of employment, while (1.1%) of them have (16-20) years of employment.

Jackson, and Linda, (2016) mentioned that means a person registered with the nurse regularity and registering authority of their country. Professional nurses are trained at higher education level with the training period between 3-4 years and above. Professional nurses are also called registered nurses working in clinical, nursing services and educational institutions.

Kanfer, et al., 2011, stated that there are a few studies which have addressed health workers motivation in Iran. Their studies aimed to find out the ranking importance of motivational factors based on demographic characteristics correlation between motivational factors, identifying the factors affecting motivation in the employees of social security hospitals in Mazandaran in northern Iran..

Table (4): Marital status of the samples

	Marital status	F	%
1	Single	28	31.1
2	Married	62	68.9
3	Divorced	0	0.0
Total		90	100%

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Table (4) shows that (68.9%) of the sample were married, while no percentage of the samples were divorced.

The study agrees with Sullivan & Decker, (2009) who mentioned that another influential biographic variable that might have bearing on job satisfaction is marital status of the employees. However, there are not enough studies to draw any conclusion about the effect of marital status on nurse job satisfaction but the limited research conducted on this area consistently indicates that married employees are more satisfied with their jobs than are their unmarried coworkers The reason may be marriage imposes increased responsibilities that may make a steady job more valuable and important. And job satisfaction is required to have a steady job.

Table (5): Place of work of the samples

	Place of work	F	%
1	Operation room	26	28.9
2	Premature unit	7	7.8
3	Emergency Unit	9	10.0
4	Fractures words	6	6.6
5	RCU	8	8.9
6	CCU	9	10.0
	Ward	14	15.6
7	Artificial kidney care unit	11	12.2
Total		90	100%

Table (5) shows that (28.9%) of the sample worked in the Operation room, while (6.6%) of them were working in the fracture words.

Al-Ahmadi, (2012) stated that organizational factors are linked to –day to-day environment where health workers carry on their duties and their level of nursing performance may be affected by the following but not limited to; organizational factors work load, night shift work, availability of resources, education and training development and manager support which ultimately affects patient's satisfaction, organizational vision and mission and the health care situation in Palestine. Some of these factors are identified and selected for assessing their effect on nurses'performance

Table (6): Work shift of the nurses

	Work shift	F	%
1	Morning shift only	52	57.7
2	Evening shift only	12	13.4
3	Night shift only	5	5.5
	Double shift	21	23.4
Total		**90**	**100%**

Table (6) shows that (57.7%) of the sample have working only in morning shift, while (5.5%) of the sample taken (night shift)

Crofts, (2009) found that the problem with a night shift work is that the human race is diurnal, who are functions during day time and night workers report a number of health problems. Grafts added, these negative effects have consequences not just for individual, but also for work place, as decreased alertness and reduced job performance that could endanger human lives and affect the quality of care at intensive care unit.

Page (2004) found that night shift can affect nurses' performance & patient satisfaction, as for example, nurses who work at night or who rotate shifts make more error from fatigue than do nurses on other shifts, and the risk for

error can increase by two to three times when nurses work 12.5 hr or more in succession

Table (7): Number of night shift of the samples per month

	Number of Night shift	F	%
1	Have not taken night shift	46	51.2
2	1-2	5	5.5
3	3 – 4	3	3.3
4	5 – 6	4	4.4
5	7 – 8	32	35.6
Total		90	100%

Table (7) shows that (51.1%) of the sample Have not taken night shift, while (3.3%) of the sample taken (3-4) night shift per month.

Ohida, et.al. (2001) examined the influence of day, afternoon, night and rotating shifts on nurses job performance and stress, where the results indicated that job performances and satisfaction was less on a rotating roster than on a fixed roster.

Although there has been a move towards studies of nursing turnover, there is still a general absence of research that attempts to associate perceptions of night duty with job satisfaction and ultimately staff turnover.

Table (8): Number of working days per month

	Number of working days	F	%
	1 – 9	28	31.2
1	10 – 20	16	17.7
2	21 – 25	41	45.6

3	26 – 30	5	5.5
Total		90	100%

Table (8) shows that (45.6%) of the sample working (21-25) days monthly, while (5.5%) of the sample working (26-30) days monthly.

Hong Lu, et al, (2004) mentioned that level of nursing performance may be affected by the following but not limited to; organizational factors work load, night shift work, availability of resources, education and training development and manager support which ultimately affects patient's satisfaction, organizational vision and mission and the health care situation in Palestine. Some of these factors are identified and selected for assessing their effect on nurses' performance. These factors were selected based on previous studies and literature review was found that more focus was on these factors in addition to the political situation in Palestine plays a large role in these factors, such as increasing the demand for health insurance and dependence on international aid

Table (9): Number of working hours of the samples

	Work hours	F	%
1	6hr	24	26.7
2	7hr	10	11.1
3	8hr	16	17.8
4	12hr	7	7.7
5	16hr	9	10.0
6	18hr	2	2.2
7	19hr	4	44.5
	24hr	18	20.0
Total		90	100%

Table (9) shows that (26.7%) of the sample have (6) hours' working daily, while (2.2%) of the sample have (18) hours' working daily.

Institute of Medicine, (2004) stated that researchers consistently identify a relationship between hours worked, nurse fatigue, and errors; with error rates doubling at 10 hours of work and tripling at 16 hours, 2004; Rogers, et.al 2004). Fatigue is often characterized by a decreased ability to complete work and a subjective complaint of feeling tired. Inadequate rest, sleep loss, and shift work schedules often contribute to fatigue.

Table (10): Monthly income of the samples

	Monthly income	F	%
1	Sufficient	24	26.6
2	Barely sufficient	35	38.9
3	Non-sufficient	31	34.5
Total		90	100%

Table (10) shows that (38.9%) of the sample have barely sufficient monthly income, while (26.6%) of the sample have sufficient monthly income.

Hughes RL, et al., (2002) stated that the salary will be affected by factors such as your location (areas that are more densely populated tend to have more income), your experience (nurses with more experience tend to earn more money), and the type of industry you work in (government, non-profit, and for-profit).Registered nurses looking for jobs in physician offices and outpatient care centers may find they face heavy competition because these places usually offer regular, week-day hours and a more comfortable workplace environment.

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Table (11): Factors Impact Female Nurses Job Performance

	Items	Yes		No		Ms.	S
		F	%	F	%		
1	Do presence of child affect your job performance	40	44.4	50	55.5	1.44	MS
2	Do decrease sleep hours affect your job performance	70	77.7	20	22.2	1.77	HS
3	Do your husband's duty affect your job performance	30	33.3	60	66.6	1.33	MS
4	Do your husband's disagreement affect your job performance	25	27.7	65	72.2	1.27	MS
5	Do night shift affect your job performance	37	41.4	53	58.8	1.41	MS
6	Do relationship with other nurses affect your job performance	35	38.8	55	61.1	1.38	MS
7	Do work environment that you work affect your job performance	64	71.1	26	28.8	1.71	HS
8	Do your salary affect your job performance	46	51.1	44	48.8	1.51	HS
9	Do your relationship with your manager affect your job performance	48	53.3	42	46.6	1.53	HS
10	Do your Relationship with patients affect your job performance	31	34.4	59	65.5	1.34	MS
11	Do the motivation system in the hospital affect your job performance	47	52.2	43	47.7	1.52	MS
12	Do work hours in the hospital affect your job performance	53	58.8	37	41.1	1.58	HS
13	Do work requirement in the unit affect your job performance	45	50	45	50	1.5	MS
14	Do the specialty you have affect your job performance	43	47.7	47	52.2	1.47	MS
15	Do medical disease affect your job performance	60	66.6	30	33.3	1.66	HS
16	Do psychological status affect your job performance	60	66.6	30	33.3	1.66	HS
17	Do rest time that you have affect your job performance	55	61.1	35	38.8	1.61	HS
18	Do hospitals risks affect your job performance	56	65.5	34	37.7	1.62	HS
19	Do dealing with male patients affect your job performance	33	36.6	57	63.3	1.36	MS
20	Do your knowledge regarding work affect your job performance	45	50	45	50	1.5	MS
21	Do your skills regarding work affect your job performance	56	62.2	34	37.7	1.62	HS
22	Do number of employees in the unit affect your job performance	61	67.7	29	32.2	1.67	HS
23	Do pregnant status affect your job performance	53	58.8	37	41.1	1.58	HS
24	Do community view affect your job performance	24	26.6	66	73.3	1.26	MS

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25	Do your Language practice affect your job performance	50	55.5	40	44.4	1.55	HS
26	Do work place distance affect your job performance	48	53.3	42	46.6	1.53	HS
	Grand mean of scores						HS

Table (11) shows that samples has high mean of score in items (2,7,8,9,12,15,16,17,18,21,22,23,25, and ittem26), while the sample has moderate mean of score in items(1,3,4,5,6,10,11,13,14,19, and item 20). Also the study revealed that the grand mean of score was high significant

The study agrees with Akerstedt, T., (2006). who stated that it is important to highlight factors that affect their performance and most importantly the organizational factors. Organizational factors are linked to –day to- day environment where health workers carry on their duties and their level of nursing performance may be affected by the following but not limited to; organizational factors work load, night shift work, availability of resources, education and training development and manager support which ultimately affects patient's satisfaction, organizational vision and mission and the health care situation in Palestine. Some of these factors are identified and selected for assessing their effect on nurses' performance. The interest stemmed from the commonsense belief that the satisfied employees are more productive than those who are dissatisfied. It is also believed that satisfied employees are more committed to their job than their dissatisfied counterparts.

According to Booyens (2013), continuous education is usually part of self development responsibility to ensure that their staff are kept up-to- date with new development. This may take the form of workshops, conferences seminar, self learning modules, individual studies or degree courses. Continuing education is professional learning experiences designed to augment knowledge, skills and attitudes of nurses and there by enrich the nurse's contribution to quality health care and their pursuit of professional career Goals. Continuing education usually relies on external training resources to accomplish.

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According to WHO Health Report (2006), the performance is a combination of staff being, available, competent, productive and responsive; poor performance

of service providers leads to inaccessibility of care and in appropriate care, which thus contribute to reduced health outcomes as people are not using services or are mistreated due to harmful practice, it results from too few staff or from staff not providing care according to standards and not being responsive to the patients need. As Hughes et al. Stated "most performance problems can be attributed to unclear expectations, skills deficits, resource or equipment shortages or a lack of motivations

Kelly (2007) stated that continuing development of one's professional skills and knowledge is an empowering experience, preparing the nurse to make decision with the support of an expanding body of knowledge.

Mckenzie, J(2001) argues that in addition to increasing knowledge, improving skills and changing attitude as Job performance requires, continuing education creates as learning attitude among employee. It can, therefore, be said that training and development increase an individual's capabilities and improves the potential effectiveness of all members of the work group with ultimately improve the ability of the organization to perform us better. However, a heavy load of in – service training activities.

A health care quality improvement is to maintain what is good about the existing health care system while focusing on the areas that need improvement. Improving the quality of care and reducing medical errors are priority areas for the Palestinian governmental hospitals (MOH report, 2011).

There are many variations of health care system around the world; the goal for health care system according to the world health organization report (2011) is to

improving performance and responsiveness to the expectation of the population. Health care systems are organizations established to meet the

health needs of target populations; it is the diagnosis, treatment, and prevention of disease, illness, injury, and other physical and mental impairments in humans. Health care is delivered by practitioners in medicine, physicians, nursing, pharmacy, allied health, and other care providers. It refers to the work done in providing primary care, secondary care and tertiary care, as well as in public health (WHO report, 2011). Health care system in Palestine is a combined entity of all resources actors and institutions

related to the financing regulation and provision of all activities whose primary intent is to improve or maintain health; it is an arrangement in which health care system is delivered (MOH report, 2011).

Considering the gravity of the issue, a large number of studies have investigated the relationship between job satisfaction and various organizational variables. For example, several researchers have examined the relationship between job satisfaction and organizational commitment (Agho et al., 2006).

3. **Conclusion**

. - (77.8%) of the samples age were (20-30) years old
.of them were college graduate (%49.5) -
of them have (1-5) years of employment (%50) -
of the sample were married (%68.9) -
of them sample working in the Operation room (%28.9) -
of the sample have working only in morning shift (%57.7) -
of the sample Have not taken night shift (% 51.2) -
.of the sample working (21-25) days monthly (%45.6) -
of the sample have (6) hours' working daily (%26.7) -
of the sample have barely sufficient monthly income (%38.9) -
- Nurse job performance affected by many factors according to the grand mean of score revealed in the results.

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Assessment of The Use of Poly pharmacy in Geriatric Patients With Multimorbidity In Kirkuk, Iraq

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ABSTRACT

Objective This study is designed to assess the polypharmacy use by elderly patients having multimorbidity in Kirkuk, Iraq Methodology. This descriptive cross sectional study conducted over one year period (1 January - 31 December, 2017) with 105 adults (75 females and 30 males) aged ≥65 years, who attended outpatient clinic of the Geriatric Medicine Department in Azadi Teaching Hospital in Kirkuk Province in Iraq. Patients with ≥2 considered as multimorbidity subjects and patients taking >5 medications considered as polypharmacy subjects. Data were collected directly from the patients by face-to-face interview technique Results The mean age was 70.49±3.88 years. The most common diseases were Hypertension and diabetes mellitus (n: 105, 100%). It was determined that (n: 95, 90.5%) of patients aged 65 to 74 years and (n: 10, 9.5%) of patients aged 75 to 82 years had multimorbidity, the difference between the two age groups was statistically significant. The mean number of drugs used by participants was 7.3±1.1 drug/ day, the highest polypharmacy was 6,7 and 8 drugs per day (n: 31, 29.52%), (n: 30, 28.57%) and (n: 30, 28.57%) respectively. There was a statistical significant increase in polypharmacy with the increase in the multimorbidity. Conclusion The prevalence of polypharmacyin multimorbid elderly patients was very high.

Keywords **Multimorbidity, Polypharmacy, Patients ≥65 years, Kirkuk,Iraq**.

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الملخص

هدف الدراسة صممت هذه الدراسة لتقييم تعدد الادوية عند المرضى المسنين الذين لديهم امراض متعددة في كركوك, العراقطريقة البحث دراسة وصفية مقطعية أجريت على مدى سنة واحدة(1 كانون ثاني – 31 كانون أول, 2017),105 مريض (75 أناث و 30 ذكور) أعمارهم ≤ 65 سنة راجعوا العيادة الاستشارية لطب المسنين في مستشفى آزادي التعليمي في محافظة كركوك, العراق.المرضى المصابون بمرضين او اكثر أعتبروا متعددي الامراض والمرضى الذين يتناولون خمسة ادوية او اكثر أعتبروا متعددي الادوية, البيانات أستحصلت من المرضى أنفسهم بطريقة مباشرةالنتائج معدل العمر كان 70,49±3,88 سنة. أكثر الامراض شيوعا كان ارتفاع ضغط الدم وداء السكري (عدد 105, 100%). أظهرت النتائج ان (عدد 95, 90,5%) من المرضى الذين تتراوح اعمارهم بين 65–74 سنة و (عدد 10, 9,5%) من المرضى الذين تتراوح اعمارهم بين75–82 سنة لديهم أمراض متعددة ولقد كان هناك فرق ذو دلالة أحصائية معنوية بين المجموعتين. معدل استخدام الادوية بين المرضى كان 7,3±1,1 دواء/ اليوم, أعلى تعدد ادوية كان 6, 7 و 8 دواء باليوم (عدد 31, 29,52%), (عدد 30, 28,57%) و (عدد 30, 28,57%) على التوالي. كانت هناك زيادة ذات دلالة أحصائية معنوية في تعدد الادوية مع زيادة تعدد الامراض الاستنتاجان تفشي تعدد الادوية عند المرضى كبار السن متعددي الامراض كان عالياً جداً.**الكلمات الدالة:** تعدد الامراض, تعدد الادوية, المرضى ≤65 سنة, كركوك, العراق

1. Introduction

In a report issued by united nations in 2015,department of economic and social affairs reported that the populationaged more than 60 years is expected to grow up by 56% worldwide between 2015 and 2030, and those over the ageof 65 years will account for more than half of the world's population by the year 2030 [1].

Getting older is frequently accompanied by chronic diseases,comorbidity and polypharmacy. Multimorbidity is defined as the co-existence of at least two chronic diseases. Multimorbidity in elderly people has been expected to range from 55% to 98% depending on datasources (2). Multimorbidity certainly leads to the use of multiple drugs. Because chronic diseases affect different organs and systems, more than one drugis prescribed to elderly people who receive health services from different specialty areas for different conditions (3).

The use of a number of different medications at the same time is defined as polypharmacy,in the studies, the use of five or more drugs is generally established as polypharmacy (4).

The presence of multiple chronic conditions increases chances of the complexity of therapeutic management for both physicians and patients, and affects negatively health outcomes. Multimorbidity is always associated with decreased quality of life, mobility and functional ability as well as increases in number of admission to hospital, physiological distress, use of health care supplies, mortality and costs [5].

When man getting older, the body undergoes several physiological changes that can affect the distribution, metabolism, and excretion of drugs. These changes are a reduction in renal clearance, liver size, and lean body mass, also hepatic enzymes activity and serum albumin may be decreased in association with the presence of chronic diseases. The most clinically importance of these changes is the decrease in renal clearance, which results in reduced excretion of water soluble drugs. This is particularly important for medications with a narrow therapeutic window (ratio of desired effect to toxic effect), like digoxin, lithium, and gentamicin,in addition to changes in pharmacokinetics, older people are also more susceptible to the effects of some drugs, particularly those that act on the central nervous system, such as benzodiazepines, which are related to an increase in postural influence and hazard of falls [6].

Polypharmacy is widespread in older people,about 20% of people over 70 years old take five or more medications [7]. In the past, polypharmacy implied unsuitable prescribing, but now this is not necessarily true, because all of the prescribed drugs may have an appropriate indication.Polypharmacy is associated with increases in many side effects, including drug interactions, adverse drug reactions, falls, multiple hospital admissions, long time of hospital stay, re-admission rate soon after discharge and high mortality rate.However, these effects may result from polypharmacy can be considered as a marker of multiple pathology or ill-health of elderly patients who are subjected more to polypharmacy [8].

The aim of this studyis to assess and evaluate the polypharmacy use by elderly patients having multimorbidity in Kirkuk, Iraq.

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2.Patients and Methods

This study is a cross sectional and descriptive study, conducted with 105 adults (75 females and 30 males) aged≥65 years, who attended outpatient clinic of the Geriatric Medicine Department in Azadi Teaching Hospital in Kirkuk Province in Iraq, over one year period between (1 January -31 December, 2017). Data were collected directly from the patients by face-to-face interview technique.

Data collected includes demographic data: age, sex, residency and body mass index, data also included questions about the current health problems, a list of the medications in use.Patients with ≥2 considered as multimorbidity subjects and patients taking >5 medications considered as polypharmacy subjects.

The study was approved by the Medical Ethical Committee, Knowledge Management and Research Section Training and Human Development Department, Kirkuk Health Directorate; the reference number of the approval is 31626 in 7/10/2019.

Statistical analysis was performed using SPSS for Windows (release 22; SPSS Inc., Chicago, IL, USA).Calculation of the p value was achieved using the z test for 2 population proportions and t test for 2 means.

3.Results and Calculations

A total of 105 elderly people including 75 females(71.4%) and 30 males (28.6%) participated in thisstudy. The mean age of the participants was70.49 (minimum= 65; maximum = 82; *SD* =3.88). Participants had a mean number of chronic illnesses of 2.7 (minimum = 2, maximum = 5, *SD* = 0.77, median = 3) per patient, **Table 1** details the number and ratio of chronic diseases.

Table 1: Details the Number of Chronic Diseases in Participants.

No. of Chronic Diseases	No.of Participants	%
2	49	46.7
3	40	38.1
4	14	13.3
5	2	1.9

	105	100%

Hypertension and diabetes mellitus were found to be the most common disease which are found in all study sample patients (*n:* 105, 100%), heart diseases ranked second (*n:* 33, 31.4%), then arthritis (*n:* 23, 21.9%) and finally stroke (*n:* 18, 17.2%) as shown in

1 .**Figure**

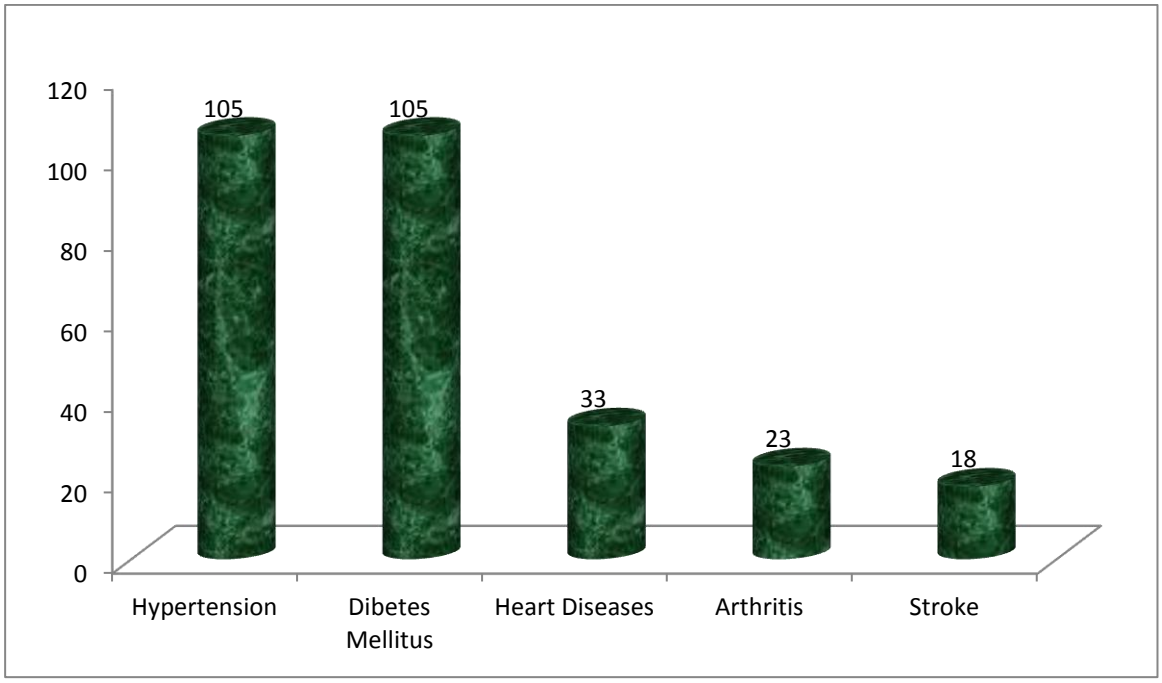

Figure 1: Distribution of chronic diseases in study sample

The rate of distribution of multimorbidity by age group was evaluated. It was determined that (*n:* 95, 90.5%) of patients aged 65 to 74 years and (*n:* 10, 9.5%) of patients aged 75 to 82 years had multimorbidity, the difference between the two age groups was statistically significant($p<0.01$) as shown in **Figure 2**.

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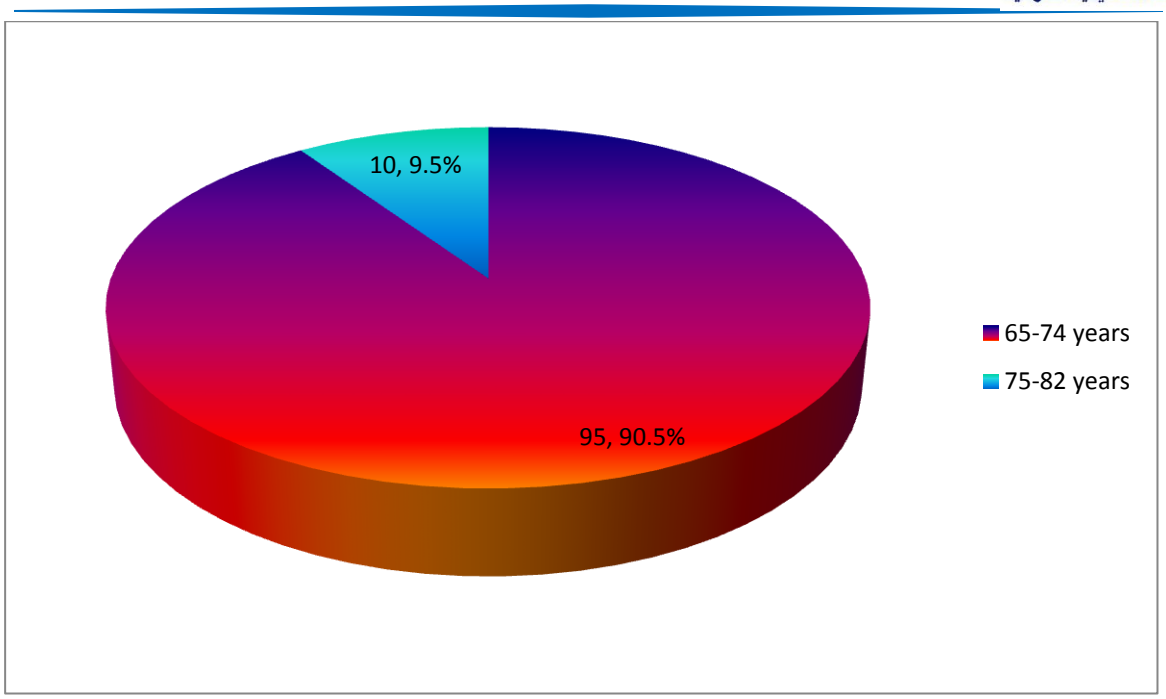

Figure 2: Distribution of multimorbidity according to age groups.

Table 2: Frequency of polypharmacy

No. of Drugs used	Frequency Of Participants	% Of Patricipants
6	31	29.52
7	30	28.57
8	30	28.57
9	12	11.43
10	1	0.95
11	1	0.95
	105	**100**

The mean number of drugs used by participants daily was 7.3 (minimum = 6, maximum = 11, *SD* = 1.1), the highest daily frequency of polypharmacy was 6, 7 and 8 drugs per day (*n:* 31, 29.52%), (*n:* 30, 28.57%) and (*n:* 30, 28.57%) respectively, while the lowest daily frequency of polypharmacy was 9,10 and 11 drugs per day (*n:* 12, 11.43%), (*n:* 1, 0.95%) and (*n:* 1, 0.95%) respectively, as shown in **Table 2**.

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Table 3: Polypharmacy means versus different groups of patients multimorbidity

	Participants		Mean of Polypharmacy	SE
	Frequency	%		
Group 1	49	46.7	6.5	0.093
Group 2	40	38.1	7.85	0.1
Group 3	14	13.3	8.36	0.33
Group 4	2	1.9	9	0
	105	100%		

Group 1 included patients with 2 multimorbidity.

Group 2 included patients with 3 multimorbidity .

Group 3 included patientswith 4 multimorbidity.

Group 3 included patients with 5 multimorbidity

There was a significant increase in polypharmacy with the increase in the multimorbidity. As shown in **Table 3** the difference between polypharmacy means of groups 1 and 2, groups 1 and 3, groups 1 and 4, groups 2 and 4,was statistically significant ($p<0.01$), while the presence of statistical significance between groups 2 and 3 was at the level ($p<0.05$). There were no statistical significant difference between groups 3 and 4.

4.Discussion

Geriatric medicine physicians are familiar to managing multiple chronic conditions on a regular basis**,** multimorbidity is a very common, highly relevant concept for specialists working with old people[9]. Multimorbidity in elderly has been estimated to range from 55 to 98% and is highest in the very old, in women and individuals belonging to low socioeconomic classes [10].

Polypharmacy, the use of multiple medications by one individual, is more and more common among geriatric patients. Caring for the growing number of older people with complex drug regimens and multimorbidity presents an important argument and challenge in the coming years [11].

In this study, a total number of 105 elderly people including 75 females and 30 males. The mean age of the participants was 70.49 and the mean number of chronic illnesses was 2.7, while in study done in 2014,it shows that sex distribution was equal and mean age was 79.3 [12], another study in 2017 showed that 1/3 were male, 2/3 female and mean age was 85.10 [13].

Hypertension and diabetes mellitus were found in our study to be the most common disease in all study sample patients (n: 105, 100%). While in other study in 2017 showed that patients with polypharmacy were more likely to have a diagnosis of hypertension and about 1/2of the patients were diabetic [13].

This study shows that the rate of multimorbidity was common (n: 95, 90.5%) in patients aged 65 to 74 years which is in agreement with a study done in Barcelonain 2019 by Marina ea al showed that the number of patients having multimorbidity aged 65–79 years was higher thanthose aged 80–94 years for both sexes [14].

The highest daily frequency of polypharmacy was 6,7 and 8 drugs per day (n: 31, 29.52%), (n: 30, 28.57%) and (n: 30, 28.57%) respectively, these results are in concordance with the results of a study donein 2019 who stated that at least 45.9% from 65–79 year age group and 61.8% from the 80–94 year age group were prescribed 5 or more drugs [14].

There was a significant increase in polypharmacy with the increase in the multimorbidity, which is in convenience with the results of a study done by Marta Gutierrez Valencia et al published in 2019 who stated that polypharmacy is highly prevalent in elderly due to the accumulation of chronic diseases and the presence of multiple prescriber [15].

In a summary,Because the increase in the elderly population globally, physicians are increasingly providing care to moreolder people and hence multimorbidity and polypharmacy are a common issues in geriatric medicine practice. The strength of the study is that it is conducted bydirect interviews with elderly patients. In this study, wewanted to highlight attention to the fact that old peoplehave polypharmacy. Rational prescription of medications is a very importantpart of providing care to elderly people. Because elderly people are more susceptible to drugs side effects anddrug interactions, physicians should have a comprehensivedrug history, review medications to reduce

polypharmacy and if necessary eliminate unnecessarymedications to protect the health and prevent adverse drug reactions

5.Recommendations

We recommend and offer some guidelines to organize prescribing in older patients, which are as follows:

Carry out a regular medications review with all changes necessary to decrease polypharmacy and stop any drugs that are not indicated.

Prescribe new medications that have clear indications.

If possible, avoid or dose reduction of drugs with potential side effects in elderly patients like benzodiazepines for example.

Use once daily or once weekly formulations.

Consider non pharmacological treatment.

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Communication Skills among Nursing staff at Azadi Teaching Hospital

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ABSTRACT

Communication is an important topic, perceived as inevitable for providing effective and high-quality health care among both patients and health care providers." To assess nurse's communication skills and identify the relationship between socio-demographic characteristics and nurse's communication skills. Quantitative design, a descriptive study had been carried out at Azadi Teaching Hospital and from the period of 5th November 2017 to 8th May 2018. To assess nurse's communication skills and identify the relationship between socio-demographic characteristics and nurse's communication skills. The collected data coded and entered to the SPSS software version 22. In this study, the data were analyzed by using inferential statistical and descriptive analysis. The mean score of the communication skills items ranging from (3.21-3.74), on the other hand 65% of the sample had Moderate communication skills and male nurses had higher communication skills. In inferential analysis indicate a significant relationship between Nurses Communication Skills and Educational level, in addition to a significant Association between Age and Years of Experience. Overall sample level of communication skill of the current study was moderate level and male nurses had higher communication skills. Levels of communication skills increase with increasing Professional satisfaction and Professional interest. Giving priority to communication skills during courses of study for the nursing students and conducting communication skill training course for the staff.

Keywords: Communication Skills, Nursing staff.

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مهارات التواصل بين الملاك التمريضي في مستشفى ازادي التعليمي.

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1 ، كلية التمريض – جامعة كركوك.

2.3 دائرة صحة كركوك – مستشفى كركوك العام

الملخص

يعتبر التواصل موضوعًا مهمًا ، يُنظر إليه على أنه أمر لا مفر منه لتوفير رعاية صحية فعالة وعالية الجودة بين المرضى ومقدمي الرعاية الصحية. تهدف الدراسة الحالية الى تقييم مهارات التواصل بين الممرضين وتحديد العلاقة بين الخصائص الاجتماعية الديموغرافية ومهارات التواصل الممرضين. لتحقيق اهداف الدراسة تم اختيار التصميم الكمي ، تم إجراء دراسة وصفية في مستشفى آزادي التعليمي ومن الفترة من 5 نوفمبر 2017 وحتى 8 مايو 2018. لمعرفة مهارات الاتصال الخاصة بالممرضين و الممرضات الذين يعملون في مستشفى آزادي التعليمي ، تم ترميز جميع البيانات وإدخالها إلى الكمبيوتر واستخدامها SPSS إصدار البرنامج 22. تم تحليل البيانات باستخدام التحليل الإحصائي الوصفي والاستنتاجي. تشير النتائج الى ان مهارات التواصل للعناصر تتراوح بين (3.21–3.74)، من ناحية أخرى ، كان 65٪ من أفراد العينة لديهم مهارات التواصل متوسط مستوى وكان الممرضون الذكور يتمتعون بمهارات تواصل أعلى. في التحليل الاستدلالي ، تشير النتائج إلى دلالة احصائية معتبرة بين مهارات الاتصال الممرضات والمستوى التعليمي. بالإضافة إلى الارتباط الكبير بين العمر وسنوات الخبرة. كان مستوى مهارات التواصل متوسطا بين المشاركين بشكل عام وكان الممرضين لديهم مهارات اتصال أعلى من الممرضات. وان مستويات مهارات التواصل تزداد مع زيادة الرضا الوظيفي والاهتمام المهني. التوصيات: إعطاء الأولوية لمهارات التواصل أثناء فترات الدراسية لطلاب التمريض وإجراء دورة تدريبية في مهارات التواصل للموظفين.

الكلمات الدالة مهارات الاتصال ، كادر التمريضي

1. Introduction

Humans thrive on relationships and Positive interactions are the essence of our happiness. Often such positive interactions occur in very brief encounters, even with relative strangers, where people share a moment of connectedness(1). “Communication is an important topic, perceived as inevitable for providing effective and high-quality health care among both patients and health care professionals.” The Previous Study indicates that communication had

a significant role in various outcomes in the health care services, for example better using of health care in the prevention of disease, better medication compliance by the patient and improving in societal support(2). Both types of communication including Verbal and non-verbal begins after delivery and continued to death. The communication process is not used only for the exchange of knowledge and information from one to another, but also significantly to interaction everywhere in the world for human beings (3). Generally nursing as a job science focuses on providing and meeting the physical, spiritual and social needs of the human beings. The nurse practice needs effective interpersonal communication, technical and intellectual abilities, in addition to knowledge (4). Connecting to others, in a positively way, is affirming. It allows us to feel like we belong to our community, and it decreases our sense of isolation. There is perhaps no more important time for people to feel connected to and supported by others as when they face a serious illness or trauma (1).

2.Methodology

Quantitative design, a descriptive study has been carried out at Azadi Teaching Hospital from the period 5th of November 2017 up to 8th of May 2018. To find out the communication skills of nurses and find out the relationship with other socio-demographic characteristics of the sample.

A Cluster type of sampling was used to select 100 nurses from 8 deferent units. In order to collect proper information for the study used a questionnaire consisted of two parts: Part one was developed by investigators and Part Two adopted a standard Communication Skills – Self Assessment questionnaire consist of 20 items. (1). The data collected through the self-report method after the instrument was translated into the Arabic language. The data were entered and analyzed through the Statistical Package for Social Sciences (SPSS) version 25.

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3.Results and Calculations

Table 1: The socio-demographic characteristics Sample.

Variables		*F*	%
Age Group	19-28 Years	62	62.0
	29-38 Years	18	18.0
	39-48 Years	13	13.0
	49 and more	7	7.0
	Mean/ S.D.	29.92/±9.459	
Communication Skills Trying	Yes	54	54.0
	No	46	46.0
Level of Education in Nursing	Secondary school	20	20.0
	Diploma Degree	50	50.0
	Bachelor Degree	29	29.0
	Post graduate degree	1	1.0
Experience	less than one year	40	40.0
	1-5 Years	22	22.0
	6-10 Years	18	18.0
	11-15 Years	3	3.0
	More than 15 years	17	17.0
Professional Interest	None	6	6.0
	Very low	18	18.0
	Low	33	33.0
	Moderate	41	41.0
	High	2	2.0
Professional Satisfaction	Very low	8	8.0
	Low	10	10.0
	Moderate	34	34.0
	High	26	26.0
	Very high	22	22.0
Total.		**100.0**	**100.0**

Table (1) indicates 62% were aged between 19-28 years old. While 7% were 49 years old and older. This result goes with finding S. Mahmood (2015) At Kirkuk city indicated that most of the sample aged between 18-34 years old. This result may be due to most of the newly employed nurses have first work directing at central public hospitals(5) and maybe the same cause of 40% of the sample for less than one year Concerning the Communication Skills Trying about half of the nurses had trying. The first three month data of 2014 indicated that communication from top-ranking leading reasons of sentinel events, a patient safety event unrelated to the patient's illness or condition that results in death, permanent harm or another qualifying negative outcome (6). More half of the sample had a Diploma Degree in nursing this is in line with findings of H Hassan (2013)(7). In the same table

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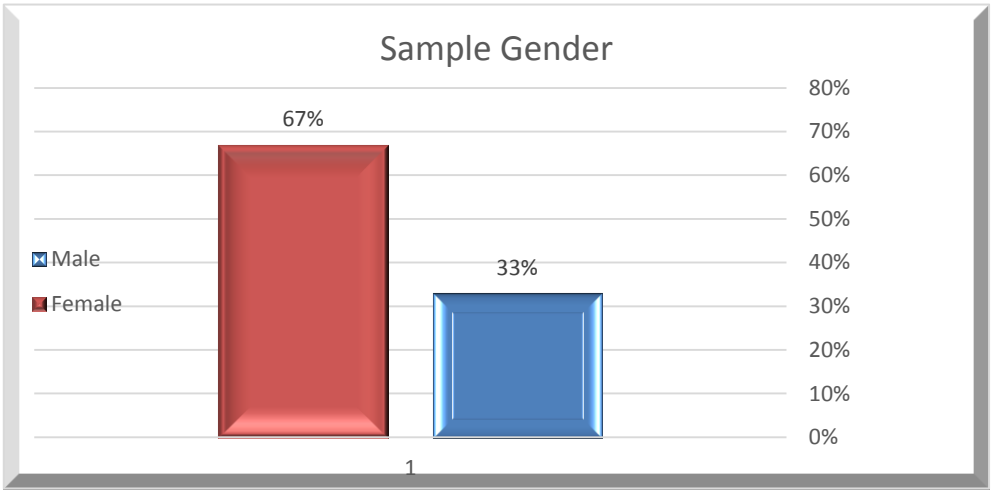
illustrate that one out of three of the participants had low Professional Interest in the nursing and quadrant of them had either no or Very low Interest in their Profession as a Nurse. Patients and careers place a high value on face-to-face communication with health-care professionals, who can engage on an emotional level, listening and assessing patients' information needs and providing information with clarity and sympathy(8). An about one out of three of the nurses had Moderate Professional Satisfaction. Dissatisfaction effect both communication skills and patients satisfaction toward staff(8).



Graph 1: Sample Gender

Graph 1 Demonstrates that the majority of the sample are females (67%) while the rest were male and represent (33%).

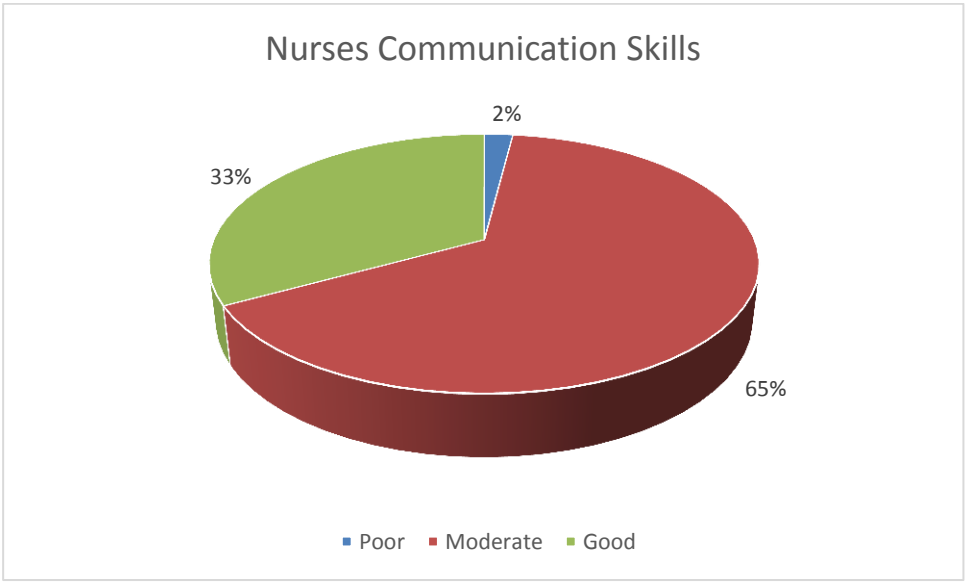


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Figure 2: Nurse's Communication Skills.

The above graph illustrates 65 % of the Nurses had a moderate Level of Communication Skills, while only 33% of participants were had a good Level of Communication Skills. these findings less than Farmanbar et al (2016) findings carried out among nursing students(9).

Table 2: comparison between Nurses Communication Skills and Nurses Sociodemographic Characteristics

Variables	N (%)	Mean	Test	Test Value	P Value
Gender					
Male	33 (33)	71.82	*t*-test	0.855	0.396
Female	67 (67)	69.67			
Communication Skills Trying					
Yes	54 (54)	72.22	*t*-test	1.569	1.20
No	45 (45)	69.02			
Educational level					
Secondary nursing school	20 (20.0)	66.9	ANOVA	2.763	.036
Diploma in nursing science	50 (50.0)	70.10			
Bachelor in nursing science	29 (29.0)	72.45			
Postgraduate degree	1 (1.0)	94			
Professional Interest					
None	6 (6.0)	62.00	ANOVA	1.836	.128
Very low	18 (18.0)	70.06			
Low	33 (33.0)	72.15			
Moderate	41 (41.0)	69.73			
High	2 (2.0)	82.50			
Professional satisfaction					
Very low	8 (8.0)	67.25	ANOVA	.492	.742
Low	10 (10.0)	71.70			
Moderate	34 (34.0)	70.24			
High	26 (26.0)	72.27			
Very high	22 (22.0)	68.91			

The above table shows a statistically significant relationship between Nurses Educational level and Communication Skills. While the non-significant relationship between other variables. The outcomes of the study exhibited needs for improvement of communication skills during education courses, in addition to the increase Educational level of the staff. It seems that the Nursing staff needs to be more familiar with communication skills, and appropriate policies are required to develop these skills during attaining

certifications and during employing. Table two shows a significant relationship between nurses Communication Skills and Educational level and non-significant relationships with other variables this result congruent with the Kounenou et al,(2011)(10) and (11) Pendleton et al, (2003). communication skills should be obligatory during nursing training courses and should be incorporated in all levels of continuing education(10). The above table shows significant relationship between Nurses Communication Skills and Educational level. While the non-significant relationship between other variables.

Table 3: Spearman Correlation (r) Matrix for Association between Nurses Communication Skills with Age and Years of Experience.

Variables		Communication Skills	Age	Years of experience
Communication Skills	Pearson Correlation	1		
	Sig. (2-tailed)			
Age	Pearson Correlation	.155	**1**	
	Sig. (2-tailed)	.123		
Years of experience	Pearson Correlation	.120	.891**	**1**
	Sig. (2-tailed)	.233	.000	

Table 3 indicates that non-significant Association Nurses Communication Skills and Age or Experience the outcome in agreement with findings Alhassan M (2019) (12). While the findings show a highly significant relationship between years of experience and age, this result usually with an advance in age attain.

4.Conclusion

Overall sample level of communication skills of the current study was moderate level and the male had higher communication skills than females. Levels of communication skills increase with the increasing Level of Education.

5. Recommendations

Giving priority to communication skills during courses of study for the nursing students and conducting continuous communication skills training courses for the staff.

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The Relationship of Body Mass Index with Disease Activity in Ankylosing Spondylitis

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ABSTRACT

Find out the relationship between body mass index (BMI) and W.C with disease activity score in AS patients and its association with clinical characteristics of AS. One hundred and five patients (75 male and 30 female) who visited rheumatology and medical rehabilitation center in Sulaimani city were recorded in this cross-sectional study. Disease activity was measured by ASDAS-ESR in the hand-held calculator. BMI was calculated and waist circumference (W.C.) was measured and both were evaluated with disease activity score and disease characteristics in those with normal BMI and W.C and those with abnormal BMI and W.C. Data of one hundred and five patients were involved in this study with a mean age of 37±9.5 years with the predominance of male gender (71.4%). The mean BMI of the patients was 27.2±4.6 kg/m², 28.6% of them were obese and 35.2% of them were overweight. Patients who were overweight, obese and increased W.C had significantly higher disease activity scores and older compared to those who had normal BMI and W.C(p value<0.05).There was no statistically significant difference between the two groups in terms of peripheral arthritis, disease duration, clinical characteristics of AS, and gender (P value>0.05). Overweight, obesity and increased W.C are common among AS patients and significantly related to disease activity score and age, but not with disease characteristics and gender.

Keywords;**Ankylosing.spondylitis.Obesity.BMI.Disease activity**

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علاقة مؤشر كتلة الجسم مع نشاط المرض لدى مرضى التهاب الفقار اللاصق

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الملخص

معرفة العلاقة بين مؤشر كتلة الجسم (BMI) ، ومحيط الخصرمع درجة نشاط المرض لدى مرضى AS وعلاقتها ببعض الخصائص الديموغرافية والسريرية لـ AS. مائة وخمسة مرضى (75 ذكور و 30 أنثى) الذين زاروا المستشفى التعليمي العام /قسم المفاصل والتاهيل الطبي في السليمانية ، المسجلين في هذه الدراسة المستعرضة. تم قياس نشاط المرض باستخدام آلة حاسبة .تم حساب مؤشر كتلة الجسم ومحيط الخصر (WC) وحساب علاقتهما مع درجة نشاط المرض (ASDAS–ESR) وبعض خصائص المرض لدى أولئك الذين يعانون من مؤشر كتلة الجسم الطبيعي وأولئك الذين يعانون من السمنة المفرطة والوزن الزائد، تم تحليل النتائج إحصائيا. تم تقييم ما مجموعه 105 مريضا في هذه الدراسة مع متوسط العمر (37 ± 9.5)سنوات مع هيمنة الجنس من الذكور (71.4 ٪). كان متوسط مؤشر كتلة الجسم للمرضى(27.2 ± 4.6)كجم / م² ، 28.6٪ منهم يعانون من السمنة المفرطة و 35.2 ٪ منهم يعانون من زيادة الوزن. كانت هناك فروق ذات دلالة إحصائية بين أولئك الذين كانوا يعانون من زيادة الوزن ، والسمنة و wc غير طبيعية والذين لديهم مؤشر كتلة الجسم العادي و wc الطبيعي فيما يتعلق بدرجة نشاط المرض المقاسة ASDAS–ESR والعمر (P <0.05). لم تكن هناك فروق ذات دلالة إحصائية بين المجموعتين من حيث التهاب المفاصل المحيطي ، ومدة المرض ، والخصائص السريرية لل AS ، والجنس (P> 0.05). فرط الوزن ,السمنة و زيادة محيط الخصرشائع بين مرضى التهاب الفقار اللاصق ويرتبط بدرجة كبيرة بنتيجة نشاط المرض ، ولكن ليس مع خصائص المرض والجنس.

الكلمات الدالة: التهاب الفقار اللاصق. بدانة؛ مؤشر كتلة الجسم؛محيط الخصرو نشاط المرض

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1. Introduction

Ankylosing spondylitis (AS) is a chronic, inflammatory disease that affects the sacroiliac joints and the spine and manifests with pain, joint stiffness, and loss of spinal mobility [1]. However, many patients have extra spinal manifestations such as arthritis, enthesitis and ductility's, and extra-articular manifestations, such as uveitis, psoriasis and inflammatory bowel disease (IBD) [2] .AS makes part of the seronegative spondyloarthropathies (SPA) .SPA represents a group of inflammatory arthritis diseases which share some clinical, genetic, and immunologic features [3]. Male are more often affected than females, with a ratio of 3:1 [4].

The prevalence of AS in different populations varies from 0.1 in African and Eskimo populations , 0.5 % to 1 % in the United Kingdom and the United States, to around 6% in the Haida Native Americans in Northern Canada [5]. It has been evaluated that about 90% of the pathogenesis of AS is genetically determined. [6]. HLAB27 gene is strongly linked with AS ; 90–95% of patients with AS are positive for HLA-B27 [7].The chance of developing AS if one is HLA-B27 positive is 1-5%, reach to 15-20% for people with an affected first degree of a family member [8]. An environmental factor triggers AS in an individual who is genetically predisposed [9].

The clinical manifestations of AS usually commence in early adulthood or late adolescence, with arrival after the age of 45 is unusual [10].There is no diagnostic laboratory study in AS.

The studies of Hematology are usually normal. The erythrocyte sedimentation rate and C-reactive protein are elevated in more than half of cases and tend to be associated with peripheral disease activity [11]. The diagnosis of AS is based on a combination of symptoms, physical findings and imaging studies establish the AS. In the absence of specific diagnostic manifestation. we rely on classification criteria. The modified New York Criteria is one of the most widely used classification criteria for AS [12]. Disease activity concept is a reflection of the underlying inflammation, includes a wide range of domains and measures [13].The most frequently used instrument for disease activity is BASDAI (Bath Ankylosing Spondylitis Disease Activity Index) [14]. Moreover, it is not sensitive to change [15] and does not include objective activity measures [16]. The new composite index to assess disease activity in AS is the ASDAS which is short for (Ankylosing Spondylitis Disease Activity Score) [17]..The ASDAS containing Erythrocyte Sedimentation Rate (ESR in mm/h) is selected as a disease activity measure. The 4 additional self-report items included in this index, aside from the value of ESR, are back pain [visual analog scale (VAS) 0–10 cm, or numerical rating

scale (NRS) 0–10], duration of morning stiffness (VAS/NRS), peripheral pain/swelling (VAS/NRS), and patient global assessment of disease activity (VAS/NRS ;) [17, 18].

The ASAS members discussed and nominated to define 4 disease activity states: inactive disease (<1.3), moderate disease activity (1.3 to <2.1), high disease activity (2.1 to 3.5), and very high disease activity (>3.5 score) [19].

AS patients like patients with other rheumatic diseases that are included rheumatoid arthritis, having an increased risk of metabolic syndrome when compared to the general population [20, 21].. Adipokines dysregulation, which are bioactive substances that are secreted by adipocytes and immune cells occur in individuals that suffer metabolic syndrome [22, 23].

A change in body composition is caused by muscle weakness, decreased muscle function and physical inactivity in AS. Quantity of lean tissue is reduced in AS, which makes total fatty tissue more conspicuous [24]. In AS, the role of excess adipose tissue has not been studied widely, the link between excess adipose tissue and inflammation in AS is suggested by some indirect results [25]. An increase in adipose tissue, which is regarded to be a dynamic endocrine organ, is related to increased production of pro-inflammatory cytokines, coagulation mediators, complement factors, IL1, and TNF [26, 27]. Low-grade inflammation of obese subjects is resulted from the overproduction of adipokines with pro-inflammatory properties and thus contributes to the expansion of metabolic disturbances and intensification of inflammatory responses [28].

2.Patients and Methods

In this cross-sectional study, a total of 105 patients (75 male&30 females) were enrolled. Diagnosis of patients was made according to the modified New York criteria from those who visited the division of rheumatology in an internal medical teaching hospital in Sulaimani .from May to November 2018

The exclusion criteria were other chronic or autoimmune inflammatory arthritis, infection, .CNS disorders, drug and alcoholic abuse

The demographic data of the patients including age, weight, height, BMI (BMI= Weight/Height^2, Kg/m^2), Waist circumference (W.C, cm), sex, disease duration, enthesitis, and peripheral joint involvement, were noted through direct interview and fulfilling the .prepared questionnaire

According to patients' BMI, their BMI was organized into 3 categories: normal BMI ≤24.9 kg/m², overweight 25.0 -29.9 kg/m², and obesity that was considered with BMI ≥30 kg/m² [29].Waist Circumference (W.C) is measured with a tape, the subject standing, at the level midway between the lower rib margin and iliac crest [30].Because the measurement of the visceral fat component is costly; therefore, W.C is used as a marker of abdominal fat mass. W.C cutoffs are (W.C < 80 cm for females and < 94 for males) for those who were not at increased risk of comorbidity, (W.C ≥ 80 cm for females and ≥94 cm for males) for those who were at increased risk of comorbidity [31] Evaluation of disease activity was done by using ASDAS-ESR (ESR, mm/hr), which was measured by hand-held calculator. All patients' data entered using computerized statistical software; Minitab 18 was used. Descriptive statistics are presented as (mean± standard deviation) and frequencies as percentages. Chi-square, and Kruskal Wallis tests were utilized as appropriate to analyze the relationship between BMI categories and patient characteristics and clinical outcomes in a patient with AS. Statistical significance was set as p-value of less than 0.05.

3.Results and Calculations

About one hundred and five AS patients were involved in the present study with the age of 37±9.5 years, 21 %(22) of them were aging 20-29 years. The higher percentages 39 %(41) were for those with age group 30-39 years. Males were more than females with a ratio as 2.5:1. The mean BMI of patients was 27.25±4.6 kg/m², obese patients were about 28.6 %(30), and overweight was 35.2 %(37) and 36.2 %(38) for patients with normal BMI. Mean waist circumference (W.C) of patients was 100±11.2 cm, 31.4 %(33) of them were with normal W.C, while 68.6 %(72) of them with W.C higher than normal (increased risk of comorbidity). The percentage of patients with a disease duration of ≤ 5 years was 41.9 %(44). Thirty nine of patients were presented with peripheral arthritis, while 58 had extraarticular manifestations, 44 had enthesitis and 14 had uveitis. The mean ESR of patients was 22±22.1 mm/hr, 50 (47.6%) of AS patients had high ESR.

Mean ASDAS-ESR of studied patients was (2.4±1.0), 17(16.2%) was inactive, 25(23.8%) of the patients had moderate disease activity, 44(41.9%) had high disease activity and19 (18.1%) had very high disease activity. Table 1

Table 1: characteristics of patients

Characteristics	Total(n=105)
Age(year)	37.25±9.5
20-29	22(21%)
30-39	41(39%)
40-49	33(31.4%)
≥50	9(8.6%)
Gender	
Male	75
BMI(kg/m²	27.25±4.6
normal	38(36.2%)
overweight	37(35.2%)
obese	30(28.6%)
W.C(cm)	100±11.19
normal	33(31.4%)
increased W.C	72(68.6%)
Disease duration(mean,SD)	8.19±6.78
≤5 years	44(41.9%)
Peripheral arthritis	39(37.1%)
Uveitis	14(13.3%)
Enthesitis	44(41.9%)
ESR(mm/hr)	22.02±22.16
ASDAS-ESR	2.46±1.01
Inactive	17(16.2%)
Moderate disease activity	25(23.8%)
High	44(41.9%)
Very high	19(18.1%)

ASDAS-ESR was higher in the overweight and obese category compared with those with normal weight category and this was statistically noteworthy (p-value < 0.05).

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The older patients that were overweight and obese, had a longer disease duration; these results were statically significant only for age (p value of less than 0.05) as presented in Table 2.

Table 2: Distribution of disease activity age, and disease duration according to BMI of AS patients

Variable	BMI			P-value
	Normal N=38	Overweight N=37	Obese N=30	
ASDAS	2.3±1.0	2.41±1.04	2.8±0.92	0.01
Age	32.6±7.84	39.27±9.15	40.64±10.1	0.001
Disease duration	6.92±5.7	9.16±6.7	8.6±8.16	0.29

No substantial differences were perceived between AS patients with normal BMI and those with overweight and obese regarding clinical symptoms and gender (p value of less than 0.05) as presented in Table 3.

Table 3 Distribution of peripheral arthritis, extra particular manifestations and gender according to BMI

Variable	BMI			Total	P-value
	Normal N=30	Overweight N=37	Obese N=30		
Peripheral arthritis					
Yes	12	14	13	39	0.6
No	26	23	17	66	
Uveitis					
Yes	8	4	2	14	0.17
No	30	35	28	91	
Enthesitis					
Yes	11	14	15	44	0.09
No	26	23	15	61	

Gender					
Male	28	26	21	75	0.93
Female	10	11	9	30	

AS patients with waist circumference higher than normal were had higher disease activity and older in age compared with those with normal waist circumference and these results were statistically significant (p value of less than 0.05), no significant differences was witnessed between the two groups regarding disease duration (p value greater than 0.05) as presented in Table 4

Table 4 Disease activity, age, and disease duration according to waist circumference

Variable	Waist Circumference		P-value
	Normal N=33	Increased Risk N=72	
ASDAS-ESR	2.07±1	2.67±1	0.007
Age (years)	32±7.2	40±9.5	< 0.001
disease duration (years)	6.97±5.69	8.8±7.68	0.23

4.Conclusion

Overweight, obesity and increased W.C are common among AS patients and significantly .related to disease activity score and age

No significant association had been seen between BMI, some clinical manifestation of AS (peripheral arthritis, uveitis and enthesitis), and gender. Additional longitudinal studies are vital to know the effect of obesity on AS pathophysiology and more studies are required to detect and monitor the response of the disease in normal and obese patients to different types of treatment.

4.Discussion

AS is a seronegative chronic inflammatory disease that involves the sacroiliac joints and the axial skeleton. Back pain and progressive stiffness of the spine characterized the AS. Arthritis of the hips and shoulders, enthesitis, and anterior uveitis are common. [32]

Obesity and overweight are increasing universally and now approach a third of the world population [33]. The World Health Organization (WHO) defines obesity as an abnormal or excessive fat accumulation that presents a risk to health [34].In AS the role of excess adipose tissue has not been studied widely; though, the association between excess adipose tissue and inflammation in AS is suggested by some indirect results [25].

The connection between obesity and its effect on disease activity in AS is investigated by a few studies; therefore; we have investigated its prevalence in AS patients and its relationship with disease activity, clinical and laboratory findings.

This study showed that (63.8%) of AS patients were overweight (35.2%) and obese (28.6%), this finding is close to that of Maas et al [35] study in which 37% and 22% of cases were overweight and obese respectively and those of Durcan et al [36] in which the prevalence of overweight and obesity were 37% and 30.5% respectively.

In the present study, we have found a significant association between BMI and disease activity by using ASDAS-ESR in AS patients (p value less than 0.05).This result is close to the results that were concluded by Durcan et al. [36], Maas et al. [35], and Zepa et al [37].

According to the data of Durcan et al[36], a cohort study of forty six AS patients, (67.5%) that were overweight or obese had worse perception concerning the benefit of exercise and higher disease activity than patients normal BMI.

Those results were supported by Maas et al. study[35], a study in the population of 465 axial sponyloarthrits patients, which unveiled that obese patients had higher disease activity score than normal BMI patients [35].

In the study done by Zepa et al[37], a cross-sectional study carried on 106 patients predicted that |The higher levels of disease activity in AS patients that were overweight and

obese were notable ($p<0.05$).All these results could confirm the recommendation for AS patients to decrease BMI to appropriate level in order to achieve a high level of remission.

In comparison to other researchers who concluded that BMI is not linked with the level of disease activity and patient related outcome {Kim et al. [38] and Vergas et al. [39]}.

Data obtained from Korean study by Kim et al in a population of 789 axial SPA patients detected that increased BMI is suggestively related with the presence of syndesmophyte, but not with the disease activity in SPA patients [38]

According to data from a SPACE cohort study in 428 patients on the effect of BMI on the disease activity in axial SPA, the disease activity score is not affected by BMI in axial SPA patients [39].

These differences in these results might be explained on basis that the overweight and obesity prevalence in the last two studies were less than those of our study, 21.7% &28.5% in Kim et al. and 18.5% &11.9% in Vargas et al. study.

In the present study prevalence of peripheral arthritis, uveitis and enthesitis were (36.2%), (13.3%) and (40%) respectively. Our study revealed that the history of peripheral arthritis and extra-articular manifestation had no effect on BMI categories ($p>0.05$). This result comparable to that of Zepa et al. study [37].

In our study, we found that AS patients with increased W.C were had higher disease activity by ASDAS-ESR and these results were significant (p value less than 0.05), similar results were concluded by Aydin et al.[40], in a study of 26 AS patients, a significant correlation was established between the visceral adipose tissue using W.C and disease activity score.

There are some limitations to our study. Firstly, the relatively small sample size was conducted. Secondly, we used BMI and W.C as a measurement index for obesity and these do not precisely determine the amount of body fat.

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The Effect of Body Mass Index on the Outcome of Pregnancy

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ABSTRACT

Obesity is one of the most common nutritional problems of complicating pregnancy. Compared with normal-weight women, obese women have a greater risk of developing .complications during pregnancy

Objective: The aim of this study is to compare maternal outcome of pregnancy in relation to .body mass index

.Study design: Prospective study

.Setting: Kirkuk General Hospital, from 1st of January 2017 to the end of June 2017

Patients and methods: A total number of 150 pregnant women are included in this study. The studied women are divided into three groups according to their BMI of; first group with BMI from (18.5kg/m2-24.9kg/m2), the second group (25 kg/m2 to 29.9kg/m2), and the third group from 30kg/m2 and above. Each group consists of 50 pregnant women. Singleton pregnancy, both primigravida and multigravida of completed 37 weeks-42 weeks are included in this study. Women with previous caesarean section, women with history of severe hyperemesis gravidarum, pregnant women with heart diseases and thyroid disorders, generalized oedema, .blood diseases and autoimmune diseases are excluded from this study

Results: In this study highly significant relation is found between hypertension and increase BMI (p=0.000). Equal number of diabetes mellitus is found in all groups 2% (p=1.000). It is noticed that history of infertility and intrauterine death rose with increasing BMI. The results shows that most of women with normal BMI delivered vaginally compared with overweight and obese women. While delivery by Cesarean section is more frequent in both over weight .(and obese pregnant women, the relation is highly significant (p= 0.000

:Conclusions: Regarding the results of this study, the following can be concluded

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.High BMI significantly increases the risk of delivery by cesarean section

Obesity is associated with increased incidence of hypertension, infertility, and IUD.

Keywords: BMI, pregnancy, maternal outcome.

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تأثير مؤشر كتلة الجسم على نتائج الحمل

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1 طبيبة اختصا ص في الامراض النسائية والتوليد, العيادات الطبية التخصصية , كركوك , العراق .

2 صيدلاني اختصاص في الصيدلة السريرية, مستشفى كركوك العام , كركوك , العراق .

مدرس الامراض النسائية والتوليد كلية الطب / جامعة السليمانية ,السليمانية , العراق .

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الملخص

السمنة هي واحدة من اكثر مشاكل التغذية شيوعا والتي تسبب مضاعفات مع الحمل.بالمقارنة مع النساء ذوات الوزن الطبيعي، النساء البدينات لديهن خطورة عالية في حدوث المضاعفات خلال فترة الحمل.

الهدف: الغرض من هذه الدراسة هو مقارنة نتائج الحمل بالنسبة إلى مؤشر كتلة الجسم.

تصميم الدراسة: مقارنة مستقبلية.

مكان الدراسة: مستشفى كركوك العام ، من كانون الثاني 2017 إلى نهاية حزيران 2017.

طريقة العمل: شملت الدراسة ١٥٠ امراة حامل تم اختيارهم بشكل عشوائي .النساء الاتي تمت دراستهن قسموا الى ثلاث مجاميع نسبة الى مؤشر كتلة الجسم، كل مجموعة تتكون من٥٠ امراة.المجموعة الاولى بمؤشر كتلة الجسم من (١٨,٥-٢٤,٩كغم\م٢) المجموعة الثانية(٢٥ – ٢٩,٩ كغم\م٢),والمجموعة الثالثة (٣٠ كغم\م٢) واكثر وتشمل الدراسة النساء الحوامل البكر والمتعددات الانجاب ممن اكملوا ٣٧ اسبوع وحتى 42 اسبوع احادي الجنين. النساء ممن لديهم عملية قيصرية ،تقئ الحمل الشديد ، امرض القلب والغدة الدرقية ،امراض الدم وامراض متعلقة بالمناعة استبعدوا من الدراسة.

النتائج:

ازدياد ملحوظ في الاصابة بارتفاع ضغط الدم مع زيادة مؤشر كتلة الجسم. ان الاصابة بداء السكري كان متساويا بين

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المجاميع الثلاثة 2 % (p=1.000). لقد وجد ازدياد نسبة العقم ووفاة الجنين داخل الرحم مع زيادة مؤشر كتلة الجسم .

معظم النساء ذوات الوزن الطبيعي انجبوا بالولادة الطبيعية مقارنة بالنساء ذوات الوزن اكثر من الطبيعي والنساء البدينات, بينما الولادة بالعملية القيصرية اكثرحدوثا بين النساء البدينات بالمقارنة مع النساء ذوات الوزن اكثر من الطبيعي و النساء ذوات الوزن الطبيعي وان العلاقة ملحوظة احصائيا (p=0,000).

الاستنتاج : فيما يتعلق بنتائج الدراسة يمكننا ان نستنتج الاتي:

1. ارتفاع مؤشر كتلة الجسم بشكل كبير يزيد من مخاطر الولادة القيصرية.

2 . النساء البدينات لهن تأثير كبير في حدوث مضاعفات للاطفال حديثي الولادة المتعلقة بالوزن الزائد،انخفاض نتيجة الابكار،دخول وحدة الخدج ووفاة الاطفال حديثي الولادة.

3 .البدانة مرتبطة بزيادة حالات ارتفاع ضغط الدم ،العقم و وفاة الجنين داخل الرحم

الكلمات الدالة مؤشر كتلة الجسم, الحمل, نتائج الحمل للام.

1.Introduction

As a measure, BMI became popular during the early 1950s and 60s. The current value settings are as follows: a BMI of 18.5 to 25 kg/m2 may indicate optimal weight; a BMI below 17.5 kg/m2 may indicate that the person has anorexia nervosa or related disorder ; a BMI lower than 18.5kg/m2 suggests the person is underweight while a number above 25 kg/m2 may indicate that the person is overweight; ; a number of 30 kg/m2 and above suggests that the person is obese (over 40, morbidly obese) BMI=weight (kg) /Height (m2) [1].

Obesity is associated with many diseases, particularly heart disease, type 2 diabetes, breathing difficulties during sleep, certain types of cancer, and osteoarthritis [2]. Obesity complicates the course of pregnancy by increasing incidence of gestational diabetes, hypertension, pre-eclampsia, urinary tract infections, birth trauma, and post-partum haemorrhage. This will result in an increase in interventions, such as monitoring, induction of labour, caesarean sections, prolonged admissions [3]. Obesity also poses a challenge in gynecology. Obese women have an increased risk of miscarriages, terminations, menstrual

disorders, anovulatory infertility [4] . Morbid obesity in pregnancy is a growing problem and is having an impact on morbidity, mortality as well as significantly increasing antenatal and intra-partum costs of pregnancy care. It also led to increased costs because of multidisciplinary management of the pregnancies, increased investigations and hospital stay when compared with normal weight pregnant women [5].

2. Aim of the study

The aim of this study is to compare maternal outcome of pregnancy in relation to body mass index.

3.Patients and Methods:

Setting:

This prospective study was conducted in Kirkuk General Hospital, during the period from the 1st of January /2017 to the end of June /2017.

Sample size:

A total number of 150 pregnant women were included in this study. The studied women were divided into three groups according to their BMI; first group with BMI from (18.5kg/m2-24.9kg/m2), the second group with BMI (25 kg/m2 to 29.9kg/m2), and the third group with BMI from 30kg/m2 and above. Each group consists of 50 pregnant women [1.[

Inclusion criteria:

Criteria for selection included singleton pregnancy, both Primigravida and multigravida of completed 37 weeks -42 weeks .

Exclusion criteria:

Women with previous caesarean section, women with history of severe hyperemesis gravidarum, pregnant women with heart diseases and thyroid disorders, generalized oedema, blood diseases and autoimmune diseases were excluded from this study.

Tools:

An interview questionnaire is designed and used to collect the relevant data. For every woman, the following variables are taken:

Age of the patient, gravidity, parity, previous IUD, hypertension and diabetes, history of infertility, gestational age at birth (the gestational age was calculated from the last menstrual

period and confirmed by early ultrasound report before 20 weeks). The BMI calculated from the women's weight and height in the antenatal cards at booking in early pregnancy (till 12 weeks). In this study we compare the pregnancy outcome among these groups including: Maternal outcome: medical diseases (hypertension, DM), mode of delivery (vaginal delivery, caesarean section.(

Statistical analysis:

The obtained data were coded, analyzed and tabulated. Descriptive statistics as frequency and percentages are calculated using computer. Data analysis was performed by SPSS statistical program using ANOVA to calculate the relations within the groups, any P value less than 0.05 was considered statistically significant .

Ethical consideration:

Ethical consideration for study has been obtained from Kirkuk general hospital. A verbal consent was taken from all participants in this study.

4.Results and Calculations

A total number of 150 pregnant women are included in this study. The studied women were divided into three groups according to their BMI; each group consists of (50) pregnant women. First group had normal BMI; (18.5kg/m^2-24.9kg/m^2), the second group was overweight with BMI from(25kg/$m^2$to 29.9kg/m^2) and the third group was obese; BMI (30 kg/m^2)and above.

Characteristics of patients in each group:

Table (1) show mean age of women with normal BMI was (24.34 ± 5.766), in comparison to (25.64 ± 4.848) in overweight, and (24.40 ± 5.131) in obese women. The data shows that mean gestational age at time of delivery in women with normal BMI, over weight group and obese women were accordingly (39.14 ± 1.262, 39.52 ± 1.568, 39.74 ± 1.664) no state difference among the groups regarding age and gestational age. Regarding to the parity statistical analysis revealed that there was no significant relation among all groups. Since the percent of nullipara in normal BMI, overweight and obese group were (51.2, 50.6, 49.8) respectively while percent of para (1-5) were (48.8, 49.4, 50.2).

Table (1). the characteristics for patients in relation to BMI

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BMI	Age of the mother(year) Mean ±S.D	Gestational age (weeks) Mean ±S.D	Parity (%)
Normal (18.5-24.9)	24.34 ± 5.766	39.14 ±1.262	Nullipara (51.2)
			Para(1-5) (48.8)
Over weight (25-29)	25.64 ± 4.848	39.52 ± 1.56	Nullipara (50.6)
			Para (1-5) (49.4)
Obese (30 and more)	24.40 ± 5.131	39.74 ±1.664	Nullipara (49.8)
			Para (1-5) (50.2)

Table (2) shows medical complication in each group, highly significant relationship was found between hypertension and increase BMI (p=0.000), since (20%) of obese women have hypertension compared to (2%) in over weight and (0%) in normal group.

Equal number of diabetes mellitus was found in all three groups2 %(p=1.000), regarding history of infertility about (2%) of obese women had history of infertility compared to (1%) in normal BMI, and (2%) in over weight (p=0.813). It was noticed that intrauterine death raised with increasing BMI as (8%) of obese women have history of intrauterine death compared to(2%)in over weigh and (0%) in normal BMI, but this relation was statistically not significant (p=0.067).

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Table (2). distribution of medical complications in studied groups.

Variables	BMI			P value
	Normal(18.5-24.9) N (%)	Overweight (25-29.9) N (%)	Obese (30 and more) N (%)	
Hypertension				
Yes	0	1(2)	10 (20)	0.000
No	50 (100)	49(98)	40 (80)	
Diabetes Mellitus				
Yes	1(2)	1(2)	1(2)	1.000
No	49 (98)	49(98)	49 (98)	
History of infertility				
Yes	1(2)	2(4)	2(4)	0.813
No	49 (98)	48(96)	48 (96)	
History of IUD				
Yes	0	1(2)	4(8)	0.067
No	50 (100)	49 (98)	46 (92)	

Mode of delivery in all groups:

The results indicate that most women with normal BMI delivered vaginally compared with overweight and obese women, (96%) of pregnant women with normal BMI delivered vaginally in comparison with (84%) in over weight group, and (58%) in obese. While delivery by Cesarean section is more frequent in both over weight and obese pregnant women compared with women with normal BMI, since (42%) of obese women and (16%) of overweight delivered by Cesarean section, and just about (4%) of women with normal BMI delivered by Cesarean Section. The relation is highly significant (p=0.000) as shown in table (3)

Table (3): Mode of delivery in the studied groups

Mode of delivery	BMI			P value
	Normal (18.5-24.9)	Over weight (25-29.9)	Obese (30 and more)	
Vaginal	48(96%)	42(84%)	29(58%)	0.000
Cesarean section	2(4%)	8(16%)	21(42%)	

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5.Discussion

Obesity is a global epidemic now and the prevalence of overweight and obesity is increasing worldwide at an alarming rate affecting in developed and developing countries [6]. Many studies evaluated the relation between body mass index and the outcome of pregnancy and found that obesity can contribute too much complication during pregnancy [7].

The study confirmed that complications of pregnancy increased in obese and overweight women compared with women with normal BMI such as hypertension, increase rate of caesarean section, IUD. Table (2) shows distribution of medical complications, it is noticed that hypertension is positively associated with raised BMI (p=0.000) this finding is in agreement with Madiha et al in 2005, who proved that hypertensive disorder more prevalent in obese pregnant women than in their lean counter parts and study done by Begum KS. et al in 2011, who found that Maternal obesity can result in unfavorable outcomes for the woman and fetus. Maternal risks during pregnancy include gestational diabetes and chronic hypertension leading to preeclampsia [8,9]. However the result is disagreed with Perlow et al 1992, who did not find an increased incidence of hypertension among obese patients [10]. This finding is consistent with Yogev et al in 2009 that No difference was found in fasting and mean blood glucose between obese and non obese women [11]. However it is contrary with Kumari et al in 2001 who reported that the incidence of gestational diabetes to be (24.5%) for patients with BMI greater than 40 compared with (2.2%) in normal BMI women; ($p<0.0001$) [12].

Although the data revealed that history of infertility was higher in over weight (4%) and obese (4%) compared with normal BMI group (2%). But this relation was statistically not significant (P=0.813). This finding is in agreement with Francisco et al, in 2000, who demonstrated that there is a strong association between obesity (BMI ≥30) and delayed conception [13]. Also this finding agrees with Hirschberg et al in 2009 who found that obesity has been associated with an increased risk of infertility and might also have a negative influence on pregnancy outcome [14].

The data shows that history of IUD was higher in multigravida obese women (8%)

compared with over weight (2%) and normal BMI group (0%). This is in agreement with Sohinee et al in 2007, who found that history of IUD was significantly higher in obese group compared with normal BMI group. Also agree with Sebire et al in 2001, who demonstrates a significant risk of IUD in obese women group compared with normal BMI group [15,16].

The present study shows that mode of delivery among all groups. In comparison with women of normal weight, for overweight and obese women, there is a progressive significant reduction in vaginal delivery with increasing BMI, which means that the delivery by cesarean section rises significantly with increase BMI. This finding is consistent with previous study by Vinayagam et al in 2012, who found that there was A statistically significant increase in delivery by caesarean section with increasing maternal BMI [17]. Roman et al in 2007, who reported that the rate of cesarean section in obese group is higher than normal BMI group women ($p<0.001$) [18].

Bergholt et al 2007, in their prospective study found that the incidence of cesarean delivery significantly rose with an increase in BMI. Women in labor with a BMI (>35) had a (3.8) times greater chance of a cesarean delivery than women with a BMI (< 25) [19]. But this finding disagree with Maryam et al 2008, who demonstrate that there were no significant differences between obese women and normal weight pregnant women regarding mode of delivery [20].

6.Conclusion

Regarding to the results of this study, it is concluded that:

High BMI significantly increases the risk of delivery by cesarean section. Obesity is associated with increased incidence of hypertension, infertility, and IUD

7. Recommendations

From the outcome of the present study the following recommendations may be suggested:

1. Carry out a survey in our country to know the prevalence of obese women. Further detailed studies needed to know the pathophysiological link between obesity and

various adverse outcome of pregnancy.

2. Perform public awareness about the hazard of obesity on the maternal outcome.
3. Body mass index should be measured as part of vital signs at routine annual check-ups and all women of child bearing age should be counseled to achieve and maintain optimal BMI. Women with high BMI planning a pregnancy should be counseled to participate in intensive nutrition programs aimed to achieve optimum BMI prior to conception

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Efficacy of Diltiazem 2% Cream as a Solid Treatment of Patients with Chronic Anal Fissure at Kirkuk General Hospital

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ABSTRACT

Background: Chronic anal fissure is a common painful benign anorectal case. Surgical operations like lateral internal sphincterotomy or manual anal dilatation are effective for healing most cases within a few weeks. However, as a side effect, permanent impaired anal .continence is likely to occur

Aim: This article aims to evaluate whether the pharmacological can be the first-line option for .the treatment of chronic anal fissure

Patients and Methods: 60 patients are enrolled with a chronic anal fissure in this work. The cases were chosen randomly from Kirkuk general hospital during the period from February 2017 to October 2018. As a first-line therapy, all patients treated with diltiazem 2% cream for .6 weeks

Results: As a result of adverse drug reaction and uncooperative patients, 10 patients were unable to complete medical treatment, while 50 patients were able to complete it. Furthermore, 40 patients (out of 50) achieved complete recovery with 25 males and 15 females. Nevertheless, 10 patients (7 males and 3 females) were failed to reach complete recovery, which makes undergoing sphincterotomy as a second-line option. Complete recovery is achieved in (n=45) 90% of patients within 5-6 weeks from the start of diltiazem 2% cream. Whereas, 10% of them (n=5) recovered with complete 6 weeks administration of .the cream

Conclusions: For majority patients with a chronic anal fissure, diltiazem 2% cream with a course of six weeks was the first-line choice therapy.

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Keywords **Chronic Anal Fissure, Diltiazem 2% cream, Medical Sphincterotomy treatment, Lateral Internal Sphincterotomy.**

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فعالية كريم الديلتيازيم 2٪ كعلاج متين لمرضى الشق الشرجي المزمن في مستشفى كركوك العام

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الملخص

خلفية : الشق الشرجي المزمن هو حالة شرجية حميدة مؤلمة شائعة. تعتبر العمليات الجراحية مثل شق العضلة العاصرة الداخلية الجانبية أو توسع الشرج اليدوي فعالة للشفاء في معظم الحالات في غضون أسابيع قليلة. ومع ذلك ، وكتأثير جانبي من المحتمل أن يحدث ضعف دائم في الشرج .

الهدف : تهدف هذه المقالة إلى تقييم ما إذا كان العلاج الدوائي يمكن أن يكون خيار الخط الأول لعلاج الشق الشرجي المزمن.

المرضى والطرق : تم تسجيل 60 مريضا مع شق شرجي مزمن في هذا العمل. تم اختيار الحالات بشكل عشوائي من مستشفى كركوك العام خلال الفترة من فبراير 2017 إلى أكتوبر 2018. كعلاج أولي ، تم علاج جميع المرضى باستخدام كريم الديلتيازيم 2 ٪ لمدة 6 أسابيع.

النتائج : نتيجة لرد فعل الدواء الضار والمرضى الغير المتعاونين ، لم يتمكن 10 مرضى من إكمال العلاج الطبي ، في حين تمكن 50 مريض من إكماله. علاوة على ذلك ، حقق 40 مريضاً (من أصل 50) الشفاء التام 25 من الذكور و 15 من الإناث. ومع ذلك ، فشل 10 مرضى (7 ذكور و 3 إناث) للوصول إلى الشفاء التام ، مما يجعل الخضوع للعضلة العاصرة كخيار الخط الثاني. يتم تحقيق الشفاء التام في (ن = 45) 90 ٪ من المرضى في غضون 5-6 أسابيع من

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بداية استعمال كريم الديلتيازيم 2 ٪ بينما ، 10٪ منهم (ن = 5) تعافوا مع اكمال المدة الزمنية للعلاج بالكريم والبالغة ستة اسابيع .

الاستنتاجات : بالنسبة لمعظم المرضى الذين يعانون من شق شرجي مزمن ، كان كريم الديلتيازيم 2 ٪ مع دورة من ستة أسابيع علاج الخط الاول للاختيار

الكلمات الدالة: شق شرجي مزمن ، كريم ديلتيازيم 2٪ ، علاج المصرة الطبية ، شق المصرة الداخلي الجانبي.

1. Introduction

Chronic anal fissure is defined as an ulcer of the anoderm. Distal to the dentate line, typically, it occurs in the midline (whether anterior or posterior) with visible sphincter fibers, anal papillae, sentinel piles and indurated margins [1]. Usually, chronic anal fissure causes severe, sharp anal pain during defecation [2]. About 90% of fissures in male gender are located posteriorly in the midline, while its percentage is equally (i.e., 50% to 50%) in females [3]. Diagnosis can typically be made by physical examination and anoscope if tolerated by the patient [3]. Atypical features, such as multiple, large, irregular fissures, or those not in the midline, may indicate underlying malignancy, sexually transmitted infections, inflammatory bowel disease, or trauma [4]. With more than 6 weeks of symptoms, a chronic fissure is usually deeper and generally has exposed internal sphincter fibers in its base [5]. Based on etiology, it is classified as primary (idiopathic) or secondary. Secondary fissures are those that occur due to some other pathology such as Crohn's disease, anal tuberculosis and patient infected with HIV [4][5]. Chemical sphincterotomy (using calcium channel blockers) is now the first line of treatment globally [6].

Diltiazem cream is very attractive and effective for the treatment of chronic anal fissures. Its mechanism of action is blocking L-type calcium channels in the smooth muscle causing relaxation of the internal sphincter. Consequently, dilate the blood vessels of the anoderm and increase the flow of blood [7]. Topical 2% diltiazem cream supply earlier pain relief with a significant reduction in pain after one week and preceded the significant healing rate of chronic anal fissure [8].

In a study post defecator pain, bleeding and irritation were significantly reduced after two weeks of therapy. Furthermore, a primary healing rate of 86% was achieved at the 6th week of therapy [9]. Although the lateral sphincterotomy remains more effective, it needs to be reserved for cases who fail in responding to chemical sphincterotomy remedy [10].

2.Patients and Methods

This study was applied in Kirkuk General Hospital, Iraq. A total of 60 patients with chronic anal fissure are collected randomly prospectively during the period from February 2017 till October 2018. Symptoms (especially pain) had been present in each patient continuously for at least six months. Full physical examination and digital rectal examination performed for each patient at the time of admission and thereafter. The treatment program consisted of digitally self-application of diltiazem 2% cream two times each day for six weeks as first-line therapy. Meantime, evaluations were carried on patient status regarding pain, bleeding, anal tone and fissure healing in every weekend to observe the patient response to medical treatment. Sphincterotomy was assigned as second-line therapy after failure of medical treatment (A total 6-week course of Diltiazem therapy) or patients' intolerance to medical therapy. Patients with other diseases (hypertension, diabetic and heart disease) were excluded from this study

3.Results and Calculations

As listed in Table 1, the patients were categorized to four ages groups: 1) 20-29 years; 2) 30-39 years; 3) 40-49 years; and 4) ≥ 50 years. Furthermore, the Table presents the number and percentage of males and females. Moreover, Fisher exact indicated 6.6 with p-value 0.0216.

Table 1. The age distributions of patients with a chronic anal fissure for males and females.

Age of patients (year)	Male		Female		Fisher exact	p-value
	N	Percentage (%)	N	Percentage (%)		
20-29	8	6.7	3	2.5	6.6	0.0216
30-39	11	9.2	6	5		
40-49	14	11.7	9	7.5		

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≥ 50	5	4.2	4	3.4		

As mentioned earlier, a total of (38) males and (22) females were involved in this study. As listed in Table 2, fissure locations were: posterior fissure in males (n= 29, 36.65%) and females (n= 3, 6.82%), anterior fissure in males (n= 7, 8.55%) and in females (n= 18, 40.9%), combined (anterior and posterior) in males (n= 2, 3.28%) and in female (n= 1, 2.27%). Pain was present in the all patients with anal fissure while bleeding account for (n= 15, 19.73%) in males and (n=7, 15.90%) in females. (n=19, 24.34%) of males and (n=12, 26.13%)of females patients had sentinel skin tag, (n=6, 7.89%) of males and (n=3, 7.95%) of females had hypertrophied anal papillae, and about (n=3, 4.60%) males ,(n=1, 3.40%) females had combined (sentinel skin tag, hypertrophied anal papillae) or other type (n=10, 13.15% males, n= 6, 12.5% females) of anal fissure.

Table 2. Characteristics of anal fissure for both male and female.

		Male		Female	
		N	Percentage (%)	N	Percentage (%)
Patients(n)		38	100	22	100
Location of fissure	Posterior	29	36.65	3	6.82
	Anterior	7	8.55	18	40.9
	Combined (posterior and anterior)	2	3.28	1	2.27
Symptoms	Pain	38	100	22	100
	Bleeding	15	19.73	7	15.9
Feature of chronicity	1. Sentinel skin tag	19	24.34	12	26.13
	2. Hypertrophied anal papillae	6	7.89	3	7.95
	3. Combination of 1&2	3	4.60	1	3.40
	4. Others	10	13.15	6	12.5

Additionally, about (83%) of patients (n=50) were able to complete the medical treatment, while (17%) of patients (n=10) were unable to complete the medical treatment (see Figure 1).

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As demonstrated in Figure 2, the major causes for stopping the medical treatment was because of headache 40%, flushing 35%, hypotension 10%, and tachycardia 10%.

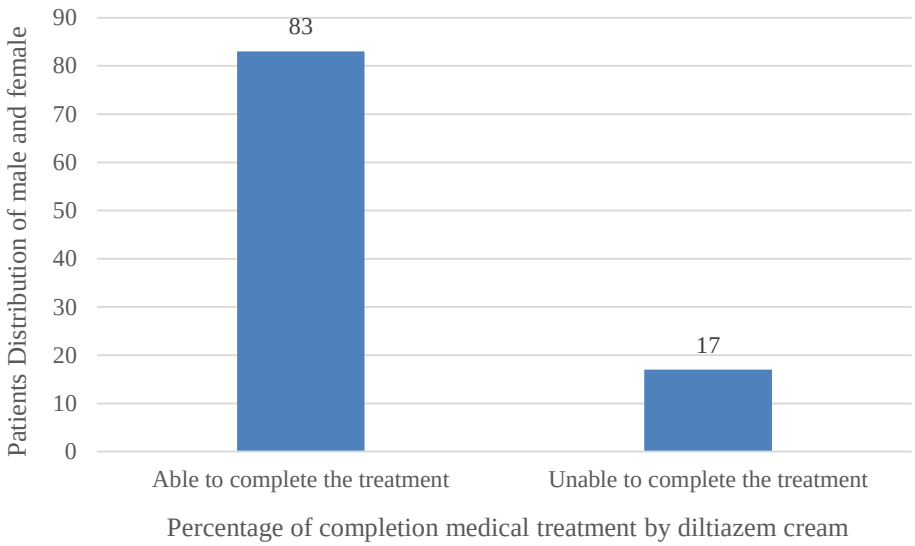

Figure 1. Patients Distribution % according to completion of medical treatment by diltiazem 2% cream.

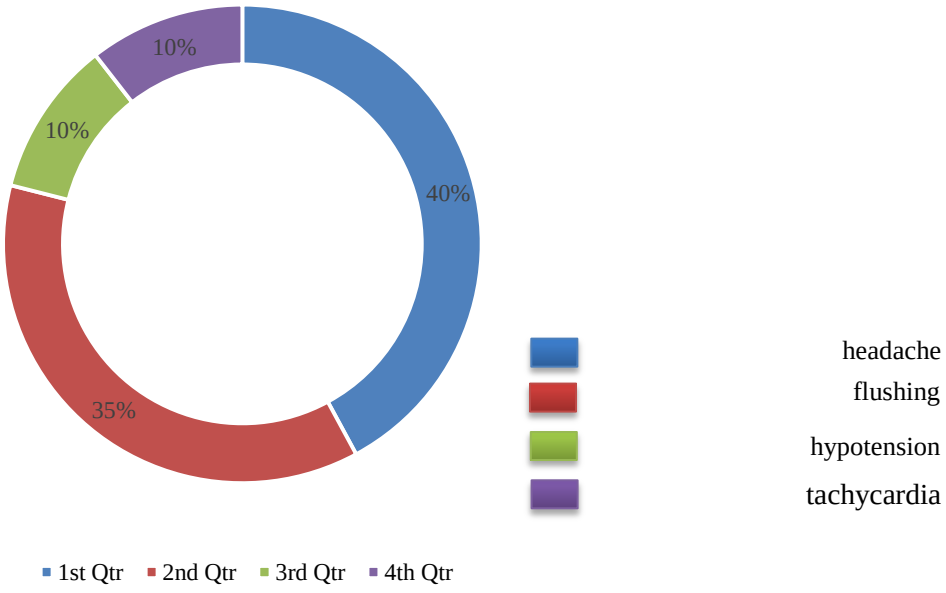

Figure 2. Patient Distribution according to cessation the treatment by diltiazem 2% cream

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The cases showed that there was a significant relationship between patients' response to diltiazem cream therapy and the degree of anal fissure chronicity (especially Sentinel Skin Tag); were p -value= 0.0005 (see Table 3).

Table 3. Patient distribution according to respond to medical treatment by diltiazem cream and degree of anal fissure chronicity.

Feature of chronicity	Response to treatment by diltiazem cream		Failure of response to treatment by diltiazem cream		Fisher exact	p-value
	N	Percentage (%)	N	Percentage (%)		
1. sentinel skin tag.	22	44	4	8	57	0.0005
2. hypertrophied anal papillae.	6	12	2	4		
3. combination of 1&2.	2	4	2	4		
4. others	1	2	11	22		

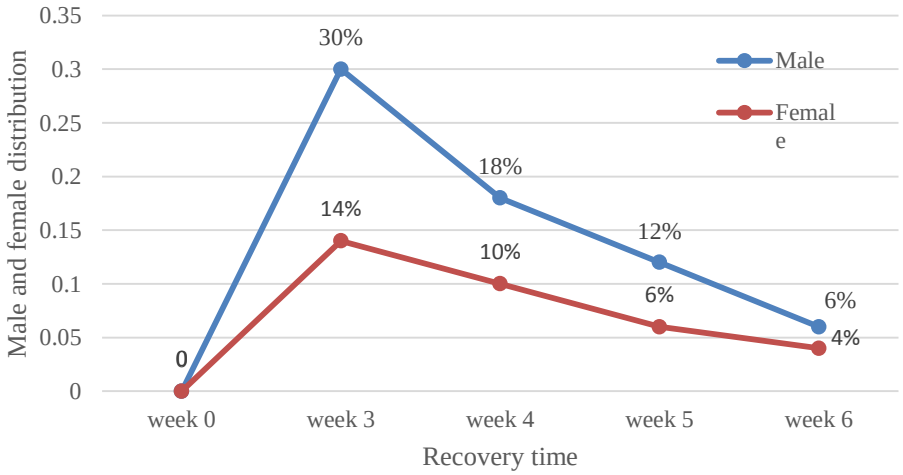

Figure 3. (male and female) distribution according to recovery time

4.Conclusion

In this article, we evaluated whether the pharmacological can be the first-line option for the treatment of chronic anal fissure. The findings showed that most of the patients were middle-aged. Digital application of topical diltiazem 2% cream is first-line therapy for chronic anal fissure and the best drug of choice for patients with best response rate, within 6 weeks treatment course.

5.Statistical Analysis

All patients' data are entered using computerized statistical software SPSS (version 17) was implemented. We used Fisher's exact test for categorical variables.

6.Discussion

This study is present that higher degree incidence of chronic anal fissure between Age 40-49 years (19%), then age 30-39years (14%), followed by age 20-29 years (9%). Besides, only (7%) were at age ≥ 50-year-old which is no congruent with study done by (Douglas W Mapel, Michael Schum, and Ann Von Worley) and the study that done by (Abro AH, Agha AH, Laghari AR, Bhurgari A, Ali S and Ali SA) in 2014 and 2015, respectively [11] [12]. Incidence of fissure was more common in male (31.8%) than in female (18.4%) that not agree with study done in 2015 about Chronic Anal Fissure – A Multi Centric Study [12]. However, it agrees with study to assess the effectiveness and side effect of diltiazem 2% gel in the management of chronic fissure-in-ano in 2015 [13]. Furthermore, 83% of patients were able to complete the medical treatment and only 17% discontinued the medication due to side effect of drug and underwent surgery as second-line therapy. This finding disagrees with study done in 2012 by Majid Aziz, Faran Kiani and Shahzad Ahmed Qasmi [14], but agrees with other study done in 2014 [15].

The most common adverse effect of the drug was headache 40% and flushing 35% which donot agree with another work in [15]. The rate of fissure healing in group of patients who are responded to medical treatment by diltiazem to other groups who fail to treatment was (62% versus 38%). There was a significant relationship between patients' response to diltiazem 2% cream therapy and the degree of anal fissure chronicity (especially Sentinel Skin Tag) that was is agree with Comparative Study of Lateral Sphincterotomy and 2% diltiazem gel local application in the treatment of chronic fissure applied in 2014 [16]. In the course of total 6-week treatment by diltiazem 2% cream, 30% of males and 14% of females achieved recovery

within 3 weeks. Additionally, 18% of male and 10% of female recover within 4 weeks, 12% of male and 6 % of female recover within five weeks, and 6% of male, 4% of female recovered with 6 weeks. This outcome is congruent with study accomplished by Rajan Vaithianathan and Senthil Panneerselvam (Randomised Prospective Controlled Trial of Topical 2% Diltiazem Versus Lateral Internal Sphincterotomy for the Treatment of Chronic Fissure) in 2015 [17].

Finally, no patient achieved recovery in the first two weeks of establishing treatment which was agreed with another study in 2013 [18].

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Posterior fossa tumors in children, Histopathology &extent of excision as prognostic factors

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ABSTRACT

The Posterior fossa is the commonest site of primary intracranial tumors in children, for the last two decades the over-all survival and 5-years progression-free survival of children with posterior fossa tumors (PFT) like Medulloblastoma& Ependymomas has been doubled due to the improvement in the diagnostic tools and the advances in the surgical techniques approaching total or near total resection. The aim of the study is to find the relation of histopathology and the extent of excision with mortality and survival. A total of twenty eight cases with Histologically (26 cases) and two cases radiologically (CT-scan and MRI) confirmed pediatric posterior fossa tumors treated in Erbil Teaching Hospital between ,Jan.2013 and Dec.2015 were included in the study

As a result the twenty-eight pediatric patients were included in the study, mean age was (8 years),16 boys and 12 girls, mean follow-up period was 14 months,11 cases had Medulloblastoma (39%), 5 cases had Ependymoma (18%), 9 cases had Astrocytoma(32%) , 2 cases had Brainstem mass (7%) and one case had Choroid plexus papilloma (4%).Tumor resection was performed in 26 patients, Twenty cases had total resection (77%), and six Pts .had subtotal resection (23%), two cases without surgery

During the follow-up period out of the 20 cases that had total resection nineteen are still alive(95%) and only one died (5%),six cases that had Subtotal resection; four of them are dead (67%) and only two cases are still alive(33%). Two cases that had no surgery both of them are dead (100%).Eleven cases of Medulloblastoma 8 of them had gross total resection and three of them had subtotal resection, 9 of them still alive (82%) and two are dead (18%). Nine Pts of Astrocytoma, 8 of them had total resection and one subtotal; eight of them are still .(alive (89%) and only one died (11%

Five pts with Ependymoma, three had total resection and two had subtotal resection, three are still alive (60%) and two dead (40%). Two cases of Brainstem mass not operated

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and both are dead, One case of Choroid papilloma totally resected & still alive. In conclusion treatment of posterior fossa tumors in children with surgery yields long survival rates, children with gross total resection or a near total resection had better outcome. Histopathology subtypes of the tumors were associated with a favorable outcome for Astrocytoma which has less mortality and better survival rate than others

.**Keywords** Posterior, fossa, pediatric, tumors, Medulloblastoma, Astrocytoma, Ependymoma, papilloma.

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أورام الحفرة الخلفية عند الاطفال

كمية الاستئصال الجراحي والنمط النسيجي المرضي وعلاقتها كعوامل تنبئية لسنوات الحياة المتوقعة

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الملخص

ان اورام الحفرة الخلفية هي الاكثر شيوعا في عمر الاطفال حيث تشكل 54% الى 70% من مجموع الاورام في عمر الطفولة. وان الهدف من هذه الدراسة هو لبحث النمط النسيجي المرضي وكمية الاستئصال الجراحي وعلاقتها مع سنوات الحياة المتوقعة ونسبة الوفيات. وقد تم التعامل مع 28 حالة من اورام الحجرة الخلفية عند الاطفال في مستشفى اربيل التعليمي في مدينة اربيل للفترة بين كانون الثاني2013 ولغاية كانون الثاني 2015 من اجل دراسة العلاقة بين النمط النسيجي المرضي وكمية الاستئصال وبين سنوات الحياة المتوقعة ونسبة الوفيات. وكانت النتائج ان متوسط عمر المرضى هو 8 سنة .11 حالة ورم النخاعي الاروميِ, 9 حالات ورم الخلايا النجمية, 5 حالات ورم الخلايا البطانية ,حالتا ورم جذع الدماغ وحالة واحدة لورم الظفائر المشيمية.

تم اجراء عملية الاستئصال التام للورم في 20 حالة و قريب التام في6 حالات وحالتين لم يتم اجراء التداخل الجراحي فيهما. متوسط مدة المتابعة لمدة 14شهرا, حالات ورم الخلايا النجمية كلهم لازالوا على قيد الحياة و 9 حالات من اصل

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11 حالة ورم النخاعي الارومي على قيد الحياة وحالتان من ورم الخلايا البطانية لازالوا على قيد الحياة وحالتا ورم جذع الدماغ توفيتا وحالة ورم الظفائر المشيمية لازالت على قيد الحياة.

من اصل 19 حالة عملية استئصال تام 18 حالة لازالت على قيد الحياة(95%) وحالة واحدة فقط توفيت(5%)،بينما في الحالات السبعة التي تم فيها اجراء عملية استئصال شبه تام حالتين فقط لازالت على قيد الحياة(29%) والخمسة الاخرين توفوا بالاضافة لحالتا ورم جذع الدماغ الذين توفيا بدون اجراء التداخل الجراحي.

نستنتج من البحث بان استئصال التام يحسن معدل الحياة وسنوات الحياة المتوقعة في حالات اورام الحجرة الخلفية عند الاطفال. ونوع النمط النسيجي المرضي لبعض الاورام ذات نسب اعلى بالنسبة لمعدل الحياة المتوقعة اكثر من غيرها مثلا ورم الخلايا النجمية اعلى نسبة من باقي اورام الحجرة الخلفية عند الاطفال.

الكلمات الدالة: الحفرة الخلفية، طب الأطفال، الأورام، ورم الأرومة النخاعية، ورم الأرومة النجمية، ورم الأرومة الدبقية.

1. Introduction

Anatomy:

The interior of the base of the skull is divided into three cranial fossae, Anterior, Middle and Posterior cranial fossa [ ]. The posterior cranial fossa is the Largest and the deepest of the three cranial fossae, contains the most complex intracranial organs.[2]. the cerebellum, cranial nerves, brainstem, cerebellar arteries, veins, pedicles and the complex fissures between the cerebellum and brainstem [3].

Etiology:

The etiology of the PFT in children remains largely unknown, Less than 5% can be attributed to a genetic predisposition (P53), and less than this can be linked to Ionizing radiation or other environmental factors, For most of the cases no predisposing factor are not yet apparent [4].

Incidence and Pathology:

Central nervous system tumors accounts for nearly 20% of all neoplasm in children under the age of 15 years [5,6]. it is the 2nd most common solid tumors form of pediatric cancer, exceeded only by Leukemia [7]. Brain tumors remain the leading cause of cancer death in pediatric oncology patients [6]. The incidence of pediatric brain tumors is roughly 3.3 per

100.000 in modern countries [8]. 54% to 70% of all childhood brain tumors are infratentorial and arise in the PF [9].

Medulloblastoma:

Medulloblastoma accounting for 20-25% of pediatric CNS neoplasm, Incidence is estimated at 2 to 6 cases per million children per year, the median age 6-9 years [10]. It is highly malignant and may disseminate [11].

Cerebellar Astrocytoma (CA):

Astrocytomas are one of the most common PFT in children (33%) [12]. Average age is 7 yrs, CAs are of low-grade and carry good prognosis for long-term survival [17].

Ependymoma:

Ependymoma is the 3rd most common PFT in the children age at diagnosis is 4-6 years [13]. WHO classified Ependymomas to (Myxopapillary, Subependymomas and Ependymomas & anaplastic Ependymoma) [14]. In general Anaplastic Ependymomas exhibit a high growth rate & have been associated with less favorable prognosis.

Brainstem Glioma (BSGs):

By definition BSGs are tumors that arise within the anatomic structures that make up the brain. Mean age at diagnosis is 6.5 to 9 yrs.

Choroid plexus papillomas:

Choroid plexus tumor is a rare brain tumor with variable clinical features according to the histological grade. [15] Choroid plexus papillomas are benign arise from ventricular choroid plexus & account about 3% of pediatric brain tumors

Clinical presentation:

Presentation is dictated by both location in the posterior fossa and aggressiveness of the lesion involved. The more malignant the lesion is, the shorter the time from symptom onset to diagnosis. The most common presenting sign of a posterior fossa lesion is hydrocephalus, and symptoms related to intracranial hypertension include headache, macrocephaly (in small children), vomiting, blurred vision (papilledema), strabismus (sixth nerve palsies), lethargy, and failure to thrive. Compression of the midline cerebellum can cause truncal Ataxia and unsteady gait.

2.Patients and Methods

A prospective study of 28 selected cases of pediatric posterior fossa tumors treated in Erbil Teaching Hospital in Erbil city between January 2013 to December 2015.

3.Results and Calculations

Twenty-eight pediatric patients were included in the study, mean age was (8 years), and mean follow-up period was 14 months. Eleven cases had Medulloblastoma (39%), nine cases had Astrocytoma (32%), five cases had Ependymoma (18%), two cases had Brainstem mass (7%) and one case had Choroid plexus papillomas (4%).Tumor resection was performed in 26 patients & two cases no surgery done. Out of the 26 cases that tumor resection performed twenty cases had total resection (77%) and six had subtotal resection (23%), two cases without surgery. During follow-up period, out of the 20 cases that had total resection 19 are still alive (95%), and one died (5%). Six cases that had Subtotal resection two of them are still alive (33%) and four of them are dead (67%). Two cases that had no surgery both of them are dead (100%).fig.4& tab.1

At time of follow-up,(fig.3&tab.2), eleven cases of Medulloblastoma eight of them had GTR and three of them had subtotal resection, nine of them are still alive (82%), and two are dead (18%). Nine cases of Astrocytoma, 8 of them had total resection and one subtotal; at time of follow-up eight of them are still alive (89%) and only one died (11%). Five pts with Ependymoma, three had total resection and two had subtotal resection, three are still alive (60%), and two are dead (40%). Two cases of Brainstem mass not operated and both are dead (100%). One case of Choroid papilloma and at time of follow-up he is still alive (100%).

Fifteen patients receiving radiotherapy (53%),one patient receiving both radio and chemotherapy because of spinal metastasis, other demographic variables, clinical variables, radiological findings, age, sex, signs and symptoms, ventricular shunting and post-op radiotherapy &/or chemotherapy were recorded but it was of no significance as a prognostic factors in the outcome of the patients included in the study.

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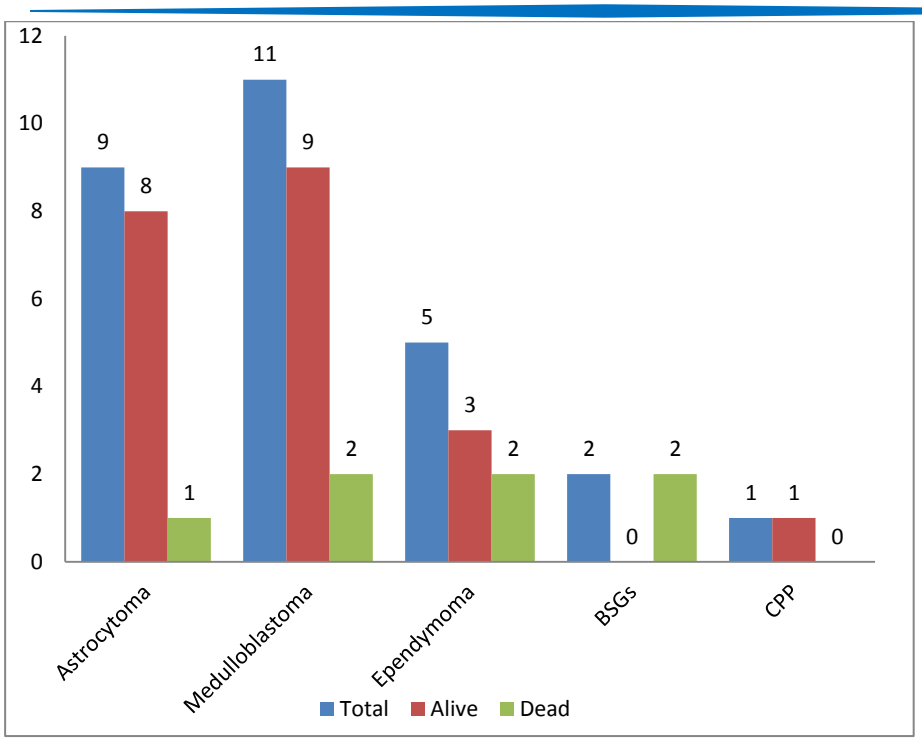

Fig.(3) PFT Histopathology subtypes cross survival.

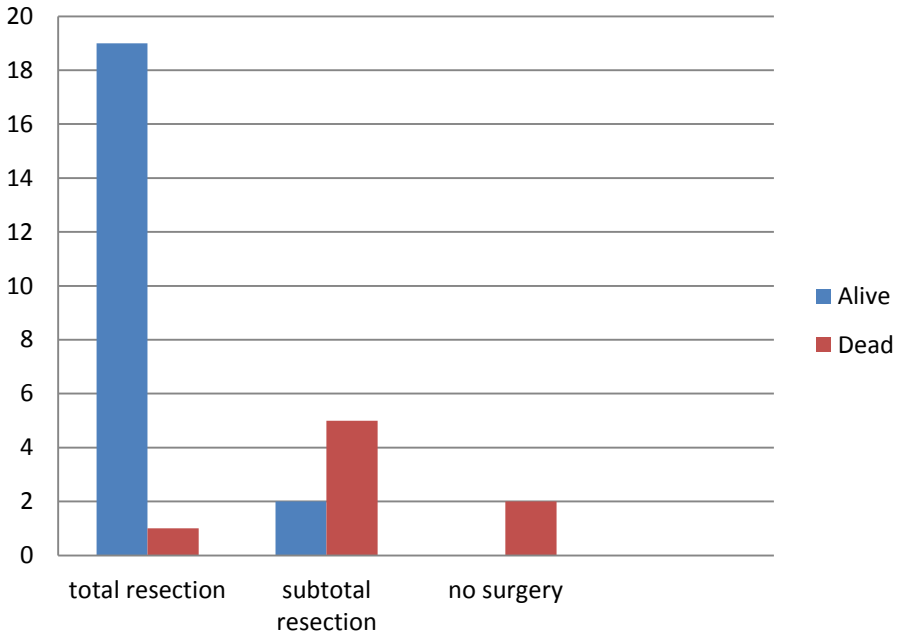

Fig.(4) Extent of excision cross survival.

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Table (1) extent of resection / patients survival cross tabulation.

			Patients condition		Total
			Alive	Dead	
Extent of tumor resection	TOTAL	Count	19	1	20
		%	95%	5%	100%
	SUBTOTAL	Count	2	4	6
		%	28%	72%	100%
	NO surgery	Count	0	2	2
		%	0%	100%	100%
Total		Count	21	7	28
		%	71%	29%	100%

Table (2) Histopathology subtypes/survival rates cross tabulation.

			Patients condition		Total
			Alive	Dead	
Histopathology subtypes	Astrocytoma	count	8	1	9
		%	89%	11%	100%
	Medulloblastoma	Count	9	2	11
		%	73%	27%	100%
	Ependymomas	Count	3	2	5
		%	60%	40%	100%
	Brainstem glioma	count	0	2	2
		%	0%	100%	100%
	Choroid Plexus Papillomas	count	1	0	1
		%	100%	0%	100%
Total		Count	21	7	28
		%	71%	29%	100%

4.Conclusion

1. Extent of excision is a major determinant of survival rate, Compared with subtotal resection and no surgery.
2. Histopathologically, Cerebellar Astrocytoma has favorable prognosis with respect to mortality, survival rate and functional outcome more than the other histopathologically subtypes like Medulloblastoma, Ependymoma and Brainstem glioma.

5. Aim of the study

To find the relation of histopathology and the extent of excision with mortality and survival.

6.Surgery

26 patients out of 28 cases included in this study underwent surgery; all of them had full clinical examination, laboratory, radiological investigations and Ventricul operitoneal shunt done before tumor excision surgery.

Operative procedure:

Both prone and sitting position used in the surgical positioning, head fixed with Mayfield or Suggita, usually midline incision used which extends from external occipital protuberance to the midcervical (according to the tumor extension or surgeon preference), cervical paravertebral muscles gently separated from the spinous processes by electocautery, periosteum striped from skull, one burr-hole done in the sub-occipital region below transverse sinus and then extended by Craniectomy to foramen magnum(fig1), first cervical spine arch maybe opened if the tumor is extending downward, dura opened in Y-shape, cerebellar cortical incision used to approach the cerebellar tumors, vermal approach used with mid-line tumors(fig2), microscope or Loupe with head lamp used, tumor excision done by bipolar cautery and gentle suction, all attempts were to reach gross total resection without injuring brainstem which was monitored by any change in heart rate &/or blood pressure, subtotal resection done in the cases were tumor was invading the floor of the fourth ventricle, homeostasis secured by electocautery and surgiseal, dura closed and if defect present Dural patch used.

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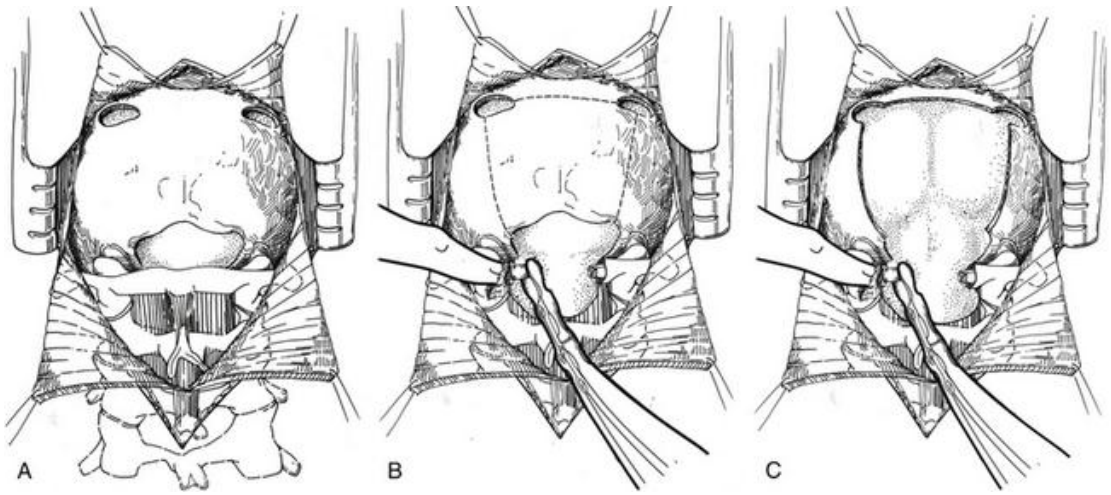

Fig.(1) Posterior fossa craniotomy.

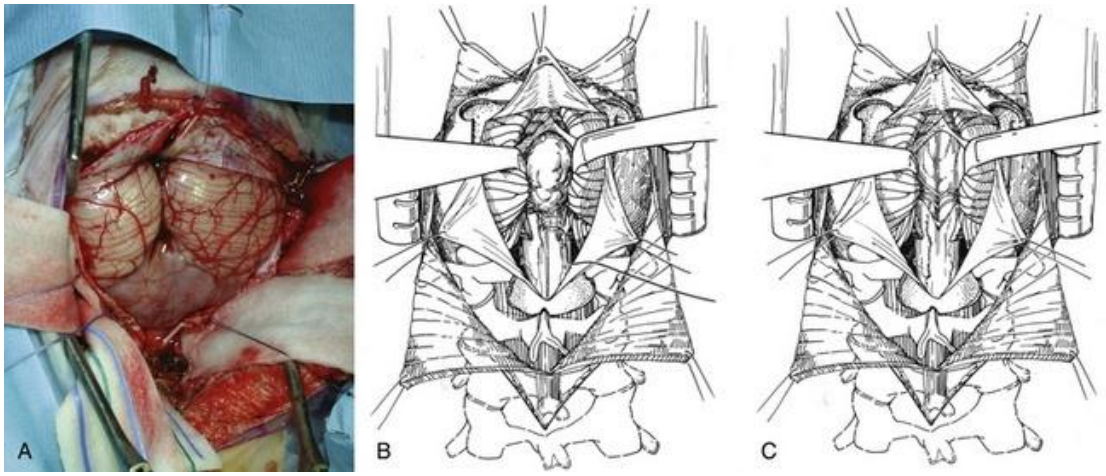

Fig.(2).خطأ! الإشارة المرجعية غير معرّفة Tumor exposure and removal.

7.Discussion

A brain tumor is the most devastating forms of human illness, especially when occurring in a small child in the posterior fossa, were Brainstem compression, herniation, and death are all risks in tumors which occur in this critical location, Posterior fossa tumors are more common in children than adults, CNS tumors are the most common solid tumors in children; between 54% and 70% [6]. Gross total resection is a major determinant of patient's

outcome and long term survival. The high survival rate in our study could be explained by the short follow-up period.

A study done by Bernt J. Due-Tonnessen et al [16], shows Astrocytoma with favorable benign behavior and better prognosis than other PFT Histopathologically subtypes with 100% survival rate, our study also showed a favorable survival rate, during follow-up period out of nine cases of Cerebellar Astrocytomas (8) of them are still alive (89%) and only one case died (11%), delayed death may be due to shunt malfunction.

For Medulloblastoma according to Smoll, Nicolas R.[17] 5-years survival rate is (72%), in our study during follow-up period out of (11) cases, nine of them are still alive (82%), and two cases are dead (18%). According to Fulya Ayman Aga-oglu et al [18], it is (65%) survival rate for pediatric posterior fossa Ependymoma, in our study during follow-up period out of 5 cases three of them are still a live (60%) and two cases are dead (40%).

M. Kaplan, Albright and Zimmer R.A et al,[19] study shows less than (10%) survival rate for Brainstem glioma, in our study it was (0%), both cases are dead (not operated). For Choroid Plexus Papilloma, Gozali AE, Britt B, Sane L et al. [20] & Ellenbogen R.G. et al,[21] study showed 90% survival rate, Dudely R.W, Torok MR et al,[22] study showed 98% survival rate, in our study it was 100%, which could be explained because it was only one case of CPPs.

The study shows that type of the tumor (Histopathology) have significant effect on mortality. In the study beside Extent of surgical excision and Histopathology subtypes, age, sex, clinical presentation & duration of symptoms had been recorded but it did not had any significance in the results, maybe because of the small sample number and short follow-up period, also post-operative Radiotherapy and Chemotherapy had been recorded but because of the difficulty to follow-up the doses and sessions and unavailability of nearby centers make it of no significance effect on the patients in the study.

8.Recommendations

1.Worldwide literatures depends on longer period of follow for more accurate results, some discrepancy might happen because of shorter follow up period, beside other

difficulties in follow up of the patients like traveling abroad for radio &/or chemo therapy and some parents were uncooperative for different reasons.

2. Complete surgical resection of the tumor is demanded whenever possible, because residual tumor leads to many problems, like recurrence, metastasis and need for higher doses of radiation.

3. Team work is always better, different specialties can contribute in the success of managing the troubles that face the patient in his journey to recovery.

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Prevalence of Bronchial Asthma among Patients attending Tertiary Allergy center /Kirkuk / Iraq

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ABSTRACT

Background: The prevalence of asthma worldwide increased last three decades, according to the world health organization estimate in 2005, around 300 million people affected with asthma, little data for its prevalence at Middle East. Objective: To evaluate the prevalence of asthma among patients attending tertiary allergy center in Kirkuk. Patients and Methods: The study included 1840 patients of different age groups from 1-4 years to age group 65 and above and deferent gender male and female, attending to allergy center from first of January to 30th of December 2017. They are diagnosed by clinical examination, spirometer, complete blood picture including eosinophil count and for certain patient's chest x rays and sputum culture for suspect fungal infections like aspergilloses. Results: The study shows an increase prevalence of asthma at Kirkuk tertiary allergy center the prevalence was 6.94% and it is prevalence significant higher in adults than children, study shows at age group 20-44 year was 37.5% and age group45-65 years total number was 528 percentage 28.7%. Seasonal changes was clear there is an increase asthma cases at spring months from April to May the prevalence was 29.83% and an increase in autumn months from September to November the prevalence was 30.05%. According to gender the study shows the females little higher than males in the females was 5053%,in males49.47% .Conclusion: The prevalence of asthma is high in these locality and need more longitudinal data studies at the level of government to discover seasonal environmental factors play role in provoking asthmatic attack and need to be observed and studied which is important in prevention of asthma in our locality.

Keywords: Nuclear structure; collective excitations; Random Phase Approximation????.

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أيجاد حالات الربو القصبي لدى مراجعي مركز الحساسية التخصصي في كركوك

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الملخص

الربو القصبي مرض مزمن وهو في زيادة انتشار في انحاء العالم. حيث بلغ عدد المصابين لحد عام2005 الى(300,000,000) شخص حسب إحصائية الامم المتحدة وهناك معلومات قليله عن نسبة انتشارها في الشرق الاوسط عموما . في هده الدراسة تم دراسة ايجاد حالات الربو القصبي في المركز التخصصي للحساسية في كركوك للفترة من الاول من كانون الثاني 2017الى 30 من كانون الاول 2017 ,وتم دراسة1840 حالة ربو قصبي من مختلف الاعمار من الفئة العمرية (1–4) سنوات حتى الفئة العمرية (65) سنه واكثر ومن كلا الجنسين وتم تشخيص الحالات عن طريق الفحص السريري واجراء فحوصات الدم وقياس حدة التنفس بجهاز فحص وضائف الرئة واشعة الصدر لبعض الحالات المستوجبة والمشابه لحالات التدرن وزرع البلغم للحالات المتوقعة للفطريات0

وأظهرت الدراسة ازدياد حالات البو القصبي ضمن مراجعي مركز الحساسية بنسبة 6.94% وكان المرض اكثر نسبة في البالغين حيث بلغ بالفئة العمرية

(20–44) نسبة 37.5 % والفئة العمرية ,(44–65) بلغ النسبة 28.7 % وهي عكس المتوقع حيث ان مرض الربو يصيب الاطفال عادة ويتم التحسن منه بالبلوغ بنسبة كبيرة .

وهناك زيادة في حالات الربو في مركزنا لموسم الربيع بالأشهر (اذار ,نيسان, مايس) وبلغ النسبة 29.8 % وكذلك زيادة في اشهر (الخريف ,ايلول, تشرين اول, تشرين ثاني)حيث بلغ 30.05 % وكان المرض في الاناث اكثر قليلا من الذكور في الاناث بنسبة 5.53 % وفي الذكور نسبة 49.47%

الكلمات الدالة: التركيب النووي، الاستئثارة التجمُعيّة، الطور العشوائي???????.

1. Introduction

Bronchial asthma: Is common chronic long term inflammatory disease of airways of the lungs and increasing airway hyper- responsiveness, characterized by variable and recurrent symptoms [1, 2].

Reversible airway obstruction and bronchospasm and symptom include episodes of wheezing coughing [3] tightness of chest and shortness of breath[1] these attacks reversible either spontaneously or with treatment .episodes may occurs a few times per day or a few times per week this become worse at night or with exercise[1] it often became at childhood[1]

The world asthma is from Greek word means “panting” [4]

Asthma is thought to be caused by complex combination of genetic and environmental factors [5].

Environmental factors includes exposure to airway pollution and allergens, other potential triggers include medication such as aspirin and beta blockers [1]

Asthma is classified according to the frequency of symptoms, forced expiratory volume in one second [Fev1] and peak expiratory flow rate [6]. It may also classified atopic or non-atopic, where atopic refers to predisposition toward development of type1 hypersensitivity [7]

Asthma is a complex multifactorial disease in which allergic factors and non-allergic triggers interact, results in bronchial obstruction and inflammation [8]. Exposure to various constituent including tobacco smoke, air born allergens ,dust mites, other in door pollutants is known triggers of wheeze or exacerbate of asthma in children they have been recently emphasized that indoor and outdoor allergens plays role in the etiology of childhood asthma[9].

In 2015, 358 million people globally had asthma up from 183 million in 1990. [10, 11] it caused death about 397.150 deaths in2015 in developing countries [1]

The prevalence of asthma in Middle East is lower than most developed countries however there is little longitudinal data to estimate the trend over time. [12]

The prevalence of asthma worldwide has increased during the last three decades.[13,14] The prevalence is increasing steadily in western countries .According to the world health organization estimate in 2005,around 300 million people affected with asthma, these number will reach 400 million in2025.[2] In some industrialized countries ,the prevalence is increasing in children [15]its reached to warning level and has affect more than one third of children[16].In Iraq asthma and allergic conditions in general has been increasing in the last three decades in relation to pollutions ,explosions ,oil companies , oil smoke, electric generators, cars and vehicle pollutions [17]

Asthma exacerbation is major cause of morbidity and mortality in asthmatic children [18]. According to study done by Smith kiln et al in 2002 around one third and those who were affected by asthma had some limitation in doing their daily activates such as physical, social activities, exercise and sleeping [19]

Seasonal variation in the frequency of asthma exacerbation, especially during child hood occur worldwide .Among preschool and older children most of seasonal information has been derived from studies of children who lived in the united states , Canada, the united kingdom and northern Europe[20,21,22] Several articles proposed that viral infections account for increase in asthma attack that are more pronounced during the fall when children's return to school[23] some studies report an increase in exacerbation in the spring[24].

Objectives

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This study will estimate the prevalence 0f asthma in Kirkuk city in Tertiary allergy center for the period from first of January 2017 to 30th of December 2017.

2.Methodology

Setting and duration: The study was done in Tertiary center for allergic diseases in .Kirkuk from the period started from first of january2017 to the 30th of december2017
Subject and sample size
All attends member to tertiary allergy center included in the study, as a convenient .sample
.The patients stratified by age, gender, type of condition and seasonal variations

:Laboratory test
:The available lab. Tests which were applied to the study sample was as followed
Complete blood picture was performed for each patient complaining of allergic problem using 5 parts hematology analyzer [Quintus] [se. 12613 Stokholm-sweden] to detect the level .of eosinophil count for the confirmation of the diagnoses

:Examination equipment
The patient were examined clinically using liftmen's stethoscope and there blood .pressure by using mercury sphygmomanometer
For evaluation of asthma status peek expiratory flow meter was applied for suitable .cases

Chest x ray was applied for certain patients complaining from reproductive cough or bloody sputum specially during exacerbation to exclude other diseases, for presumptive tuberculous cases early morning two samples 0f sputum was performed to exclude the previous pulmonary tuberculosis among these patients and some un common cases as pulmonary candidiasis as Aspergillosis and Nocardiosis

2. Results and Calculations

Table-1-illustrate the distribution of asthmatic patients

Months	Total asthmatic patients during each month	Percentage
January	114	6.20
February	162	8.81
March	216	11.73
April	192	10.43

May	141	7.67
Jun	85	4.61
July	117	6.36
August	135	7.34
September	191	10.39
October	164	8.91
November	198	10.76
December	125	6.79
T0tal	1840	100%

Table -2- illustrate the total no. of patients according to seasons

Season	Total asthmatic patients each season	Percentage
Winter [Dec, jan,feb]	401	21.79
Spring [march, April ,may]	549	29.83
Summer [Jun, July, August]	337	18.31
Autumn [Sep,October,nov]	553	30.05
All seasons	1840	100%

Table-3-illustrate the total no. of asthmatic patients according to age group

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Age group	Total no, for each age group	percentage
1—4 year	58	3.15
5-9 year	119	6.47
10-14 year	167	9.07
15-19 year	176	9.57
20-44 year	690	37.5
45-64 year	528	28.7
65 year and more	102	5.54
Total	1840	100%

Table -4-illustrate the distribution of asthmatic patients according gender

Age group	Male	Percentage	Female	Percentage
1- 4 years	24	1.30	34	1.84
5- 9 years	59	3.21	60	3.27
10- 14 Years	96	5.22	71	3.86
15- 19Yaers	77	4.19	99	5.39
20- 44 years	317	17.24	373	20.28

45 -64yaers	272	14.79	256	13.92
65 years and more	64	3.48	38	2.01
T0tal	1840	49.43		50.57

This study shows an increase prevalence of asthma at Kirkuk tertiary center there are1840 cases of asthma from the whole allergy center attendance26509 in one year ,the prevalence was 6.94% as clear in table no.1 which is agree with asthma prevalence in the middle east as previously mention.

In table no 2 the seasonal fluctuation is clear there is increase asthma cases at spring months from April march and May. The prevalence was 29.83% and second increase at autumn moths September October and November the prevalence was30.05% and the lowest prevalence at summer months which was18.31% these results agree with all studies before.

Table illustrated the distribution of asthma according to age group which demonstrated significant higher in adults then child it is at age group20-44 total no.90 percentage37.5% and age group 45-65 total no.528 percentage28.7%.Which is not in occurrence with most studies showing predominance for asthma and wheeze during the first decade of life which reserved around time of puberty.

Table no.4 illustrate the distribution according the gender the table shows the female little high then males in the females was50.53% in males49.47 although studies found that women have 10.5 % higher chance of developing asthma over life time then men, boys under age 18 have 54% higher chance of develop asthma then girls.

3.Discussion

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The prevalence of asthma and allergy increased during last decades especially in child, however little is known about middle east region, , 50 studies in the middle east examine the prevalence of asthma and allergy in children under age of 18 years according to ISAAC criteria and were included total no. of 289.717 children were exam med in included studies the prevalence varied from0.7% in Isfahan to 22.3%to Baghdad. The total prevalence of diagnosed asthma was calculated 7.35%. The prevalence of asthma in Iranian child varied from1.26-11.6 the prevalence among Iranian school child is lower in compares for other neighbor countries [25,26].

According to study done among children at primary school in Baghdad the prevalence of asthma ever was 22.3%. Asthma was detected in 81.9% of those with wheezing in the last 12 months. Males was were predominant among child with asthma ever, Prevalence rates of asthma and of severe symptoms decreased with increasing age [27].

The prevalence of asthma in our study was 6.94% which agree with studies done at meddle east as shown above.

. In this study seasonal fluctuation is observed, there is an increase in asthma cases during spring months from march to May and autumn months from April to September and lower asthma cases at summer months, there are many provoking factors could play important role provokes asthmatic attack and need to be studded in addition to the findings in current study .

more detailed studies of environmental exposure that change parallel with seasonal epidemic of asthma in our locality for improving our understanding of the etiology and prevention of bronchial asthma in our locality [17]. Although studies found that women have 10.5% higher chance of developing asthma over their life time than men, boys under age 18 have 54% higher chance of develop asthma than girls[27]. In Europe asthma is more common in females 4.3% than in males [28,29] Women generally have disproportionate greater share of caring and house hold responsibilities then men as result they tend to be more exposed to asthma triggers like allergens [dust mites, fungus, molds and yeasts] and sensitizing agents [cleaning materials and house sprays] also perfumes, social personal health products cosmetics and others [29].In our study female asthmatic patients higher than male which agree with studies above.

The prevalence asthma in our study is high in adults than in children it is in occurrence with study done in Ma'an govern ate, Jourdan study demonstrate significant higher prevalence of asthma in adults than in children, this findings are not in occurrence with most studies shown predominance for asthma and wheeze during first decade of life which is reserved around time of puberty [30,31].

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Futile care in Kirkuk teaching hospital burn unit

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ABSTRACT

Futile medical care; is a medical term applied when there is no reasonable hope of improvement or cure in spite of expense of medical or surgical care. Futile medical care decision governed by a variety of scoring systems to evaluate clinical situation and direct medical effort in respecting the patient requirement, surrogate allowance. Where and when the medical treatment being futile is another view must be sought for afflicted patient.

January 2012-until December 2018). The total admission number of patients are 2076 in the burn unit of Kirkuk teaching hospital, (1284 female, 762 male burns casualty) 74% of them are saved but (26%) 538 patient are dead out of total number of admission , (21%) 435 patient are with expected death, but (5%) 103 {(79 pediatric less than 12 years) and (24 patient age more than 56 years)} with un expected death the latter are succumbed to sepsis even with our best available rescue management.

This study is conducted (21%) 435 patients (with more than 55% BSAB. & mostly associated with inhalational injury) sex variation {23 male (25-55 years), 412 female (13-45years)} most of them self-immolation; who are falls under the known guide lines {DNR=Do Not Resuscitate} comfort care applied to them, the researchers use R-Baux score to predict the probability of death after burn injury was calculated for each patient by following formula: (TBSA + age + [17×R]). {R=1 if patient has inhalation injury and R=0 if not}.

The aim should be put before materials & methods: Evaluating the works of the burn unit staff in terms of the challenges faced in the current Iraqi circumstances. Different formula is used to predict the mortality in burn causalities to reach to the best results.

The results of the current study show more increases in the mortality than American and European studies because of the less facilities and limited resources in Iraq.

Keywords: *Futile; Burn care; Baux score; Apoptosis; self-immolation..*

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الرعاية الطبية غير المجدية في وحدة الحروق في مستشفى كركوك التعليمي

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الملخص

الخلفية؛ ان الرعاية الطبية غير المجدية هي مصطلح طبي يطبق لحالةالمريض الطبية عندما لا يكون هناك أمل معقول في التحسن أو العلاج على الرغم من تكلفة الرعاية الطبية أو الجراحية. وان قرار الرعاية العقيمة يحكمها مجموعة متنوعة من أنظمة التقييم لوضع المريض السريري والجهد الطبي المباشر بما يخص متطلبات المريض ، ومن ينوب عنه واوصيائه. أين ؟ومتى؟ يكون العلاج الطبي غير ذي جدوى؟ هذا هو موضوع البحث.

هذه دراسة بأثر رجعي حول المرضى الداخلين لوحدة العناية بالحرق على مدى 7 سنوات (من يناير 2012 حتى ديسمبر 2018) وكانو 2076 مريض (العدد الإجمالي للراقدين) في وحدة الحروق بمستشفى كركوك التعليمي ، منهم (1284 أنثى ، 762 مصاب بحروق الذكور) 74٪ منهم قد تم انقاذهم وعلاجهم ولكن (26٪) 538 مريض قد توفى ، (21٪) 435 مريض كانوا في حالة وفاة متوقعة ، لكن (5٪) 103 {(79 أطفال أقل من 12 عامًا) و (24 مريض ممن يزيداعمارهم عن 56 سنة)} مع وفاة غير متوقعة ، هؤلاءالمجموعةالأخيرة قد تعرضوا للاصابة بالإنتان حتى مع أفضل طرق العناية المتاحة لدينا التي قدمت لهم لغرض إنقاذهم.

هذه الدراسة التي أجريت على هؤلاء المرضى (21٪) 435 مريضًا (مع أكثر من 55٪ BSABحروق الجسم. وتتصاحب في الغالب بالإصابة الاستنشاقية) الاختلاف الجنسي {23 ذكر (25–55 سنة) ، 412 أنثى (13–45 سنة)}(عدد الاناث اكثر ومعظمها حالات انتحار). الذين تكون حالاتهم اكبر من امكانيات المعالجة المتاحة لذا فانهم يندرجون تحت لائحة {DNR = لا تنعش} وتطبق عليهم العناية المريحة وتقليل الالم ، نعتمد تحديد الحالات لغرض تقييمها وتصنيفها بمعادلة R–Baux للتنبؤ باحتمال الوفاة وذلك باحتساب إصابة الحرق لكل مريض عن طريق الصيغة التالية:

(TBSA + العمر + [17 × 1 = R}. {إذا كان المريض يعاني من إصابة الاستنشاقيه R إن لم يكن تكون صفرا[R.

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هي تقييم عملنا على الرغم من التحديات التي نواجهها في ظروف العراق. لقد استخدمنا صيغ مختلفة للتنبؤ بالوفيات في إصابات الحروق للوصول إلى أفضل النتائج التي يمكن أن نقترب منها نحو الافضل.

تظهر نتائجنا زيادة في نسبة الوفيات أكثر من الدراسات الأمريكية والأوروبية لأن لدينا امكانيات أقل وموارد محدودة.

الكلمات الدالة: حرق ، الرعاية غيرالمجدية ؛ درجة بوكس ، موت الخلايا المبرمج، الانتحار بالحرق.

1. Introduction

Futile medical care decision is an outcome of variable scoring indices[1] from which burn physician decide comfort care[2,7] is the only choice that must be applied to a characteristic burn patient depending on differences in certain variables including (Age[3,7,8], Sex[4,5], BSAB %[3,4,5], presence of Inhalational injury[3,4,5], comorbidities[8], systemic collateral damage, type of burns; flame, scald, electrical, contact, or chemical). Following massive burn trauma a synergetic burden of associated variables affects the patients' body homeostasis at the cellular level; as a result of the severe trauma which lead to severe dehydration, accompanied by cytokine storm which result in electrophysiological membrane dysfunction[10], these factors disturb an effective innate immune response in GIT intestinal mucosa, lymphocytes and crypt intestinal epithelial cells can be driven to apoptosis after severe trauma[9], Acute lung injury ; along with apoptosis of cells in the spleen and thymus are induced by remote (immunological) organ injuries[12,13,14], This eventually results in organ dysfunction and systemic infection[15], in the burn wound both early apoptosis and delayed necrosis are present in the zone of ischemia[6]

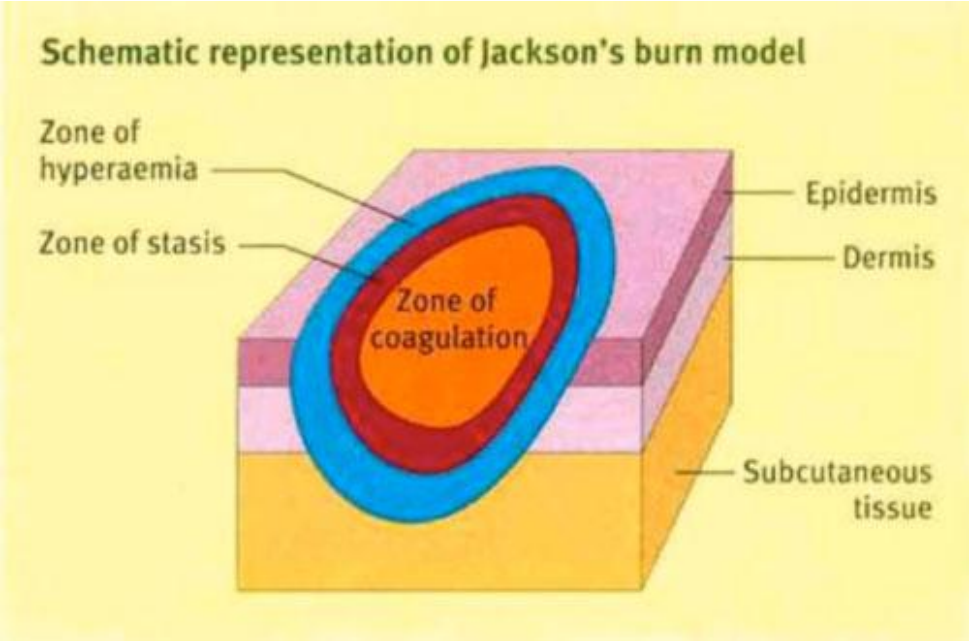

Figure 1: Contributing of injury progression

2.Materials & Methods

In Kirkuk city, Azadi teaching hospital burn unit which is the central part of referral burn causalities in Kirkuk region and surrounding governorates (Tikrit & Diyala) ,the burns are very aggressive painful event in the life of patient, and his her family surrogate on various level (physical ,psychological, and financial issues). In this retrospective study ; over 7 years The total admission number of patients are 2076 in the burn unit of Kirkuk teaching hospital (1284 female, 762 male burns casualty) 74% of them are saved and managed either conservatively or surgically with early excision and prompt skin grafting, but (26%) 538 patient are dead out of total number of admission, The exclusion criteria from the current study is those who comprise (5%) 103 {(79 pediatric less than 12 years) and (24 patient age more than 56 years)} with un expected death they are succumbed to sepsis even with the best available rescue management and they died unfortunately.

3.Results and Calculations

In the present study , about (21%) of 435 patients are expected to be dead; whom at the time of admission are evaluated according to R-Baux scoring to predict probability of death and it shows mostly more than 120 % -150 % death probability, sex variation{23 male (25-55years) suicidal attempt, and 412 female (13-45years)}most of them self-immolation; who are falls under the known guide lines {DNR=Do Not Resuscitate} comfort care applied to them, The reserchers use R-Baux score to predict the probability of death after burn injury is calculated for each patient by following formula:(TBSA + age + [17×R]). {R=1 if patient has inhalation injury and R=0 if not}.

4.Conclusion

The good understanding of the burn pathophysiology and the sequences the wound pass on time factor ; is so important because the cell death in burn patient occurs in two parallel ways the direct destructed cells and the progressive sequential way (apoptosis); the two are meet at death of the human body, the planning whether to give the patient a trial of resuscitation with active intervention is an option given to a patient when his/her condition met with resources with available equipment's (skin substitutes and skin culture lab and cadaveric skin banking) so the opportunity to save patients with a higher percentage burns but

if it is working in very limited resources the limitation decrease the percentage of burn that can be saved exponentially.

5. Discussions

Jackson's pathophysiologic description of the burn wound into three zones of injury: The Zone of coagulation; surrounded by the Zone of stasis, and the zone of hyperemia[6]. Approximately half of the cells in the zone of stasis undergo apoptosis or necrosis as a result of oxidative stress, ongoing inflammation, and decreased blood flow due to micro thrombosis [16], so the programed cell death are initiated since early minutes following the burn event, any delay in rescuing the burnt patient increasing the chance of bad progression. On the other hand patient who attempt suicide usually choosing a place where no one knows about his /her trial; the self-immolation of a patient by burns usually associated with severe inhalational injury because in all the current study the researchers smell smell the gasoline odor or they give history of using highly inflammable substance and being isolated from their families; usually in a closed spaces.

Another important factor is the duration of burning; because time factor in contact with flame lead to more increase in the depth of burn; the explanation behind that is the internal conflicts and the severe psychological pain that will not be erased until the new external skin pain attracting her\his conflicts to be then after seconds to minutes since ignition with full thickness injuries.

Another issue is the delay until attending primary care and secondary care emergency rescue place to receive the efficient care ABCD measures. The earliest admission with a good opportunity to be saved but more delay associated with more probability of death.

In the present study, about (21%) 435 patients (sshow 1);(with more than 55% BSAB. & mostly associated with inhalational injury) sex variation {23 male) (25-55 years) most of the male patients with deep psychological problems they feel unregretted, and they insisting for going to death.

On the contrary contrast 412 female (13-45years) most of them have self-immolation; they are mostly regretted, concerning of their life; cooperative to be helped, always seeking to be saved; in spite of her/his severe condition. It has been evaluated thateach patient specifically because the variety of variables (age, sex, surface area burned, inhalational injury, comorbidity, resuscitation sufficiency are being in some patient and absent in other.

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Those who are falls under the known guide lines {DNR=Do Not Resuscitate} comfort care applied to them; the researcher's use R-Baux score to predict the probability of death after burn injury it is calculated for each patient by following formula:

(TBSA + age + [17×R]). {R=1 if patient has inhalation injury and R=0 if not}

Table 1: Inhalational injury, Age limits, Scoring system and the Probability of death among Patients

Futile care patient	No.	Presence of inhalational injury	Age limits	Scoring system for evaluation	Probability of death
Male	23	Inh.injury +ve	25-55 years	Baux score	120-140%
Female	412	Inh.injury +ve	13-45 years	Baux score	110 -160%
Total palliative care (7 years)	435				

Table 2 the Comparison among hospitals in terms of Cities, Time study, No. of sample and R-Baux scoring Futile.

City burn center	Chelsea and Westminster Hospital[18] UK	Prelada Hospital[19] Portugal	Uttar Pradesh, [20] India.	Royal North Shore Hospital[17] (RNSH). Australia
Time of study	January 2004 to July 2013	January 2011 and December 2014	August 2010 and July 2013	2006-2017
Number of sample	5246 patient	233 patients	108 patients,	2003
R-Baux scoring Futile	115%	120%	110%	107%

The current limitations in Iraqi hospitals in surgical intervention is the old fashions equipment's dermatomes surgical machines in the operative room some important dressing tools like

the skin substitutes or integra which is very important in management of extensive wounds more than 50% BSAB full thickness wounds that needs to be covered promptly.

The scoring of burn which is used in the current study is the Baux Score; which is continue to provide a simple logical Ratio of the Risk of mortality & Survival after major burn injury; AGE + BSAB% (+/0 Inh. Inj. 17). It is increasingly common, and it can be giving decisions by unspecialist about initial triage, management planning.

6. Aim of study

Evaluating the works of the burn unit staff in terms of the challenges faced in the current Iraqi circumstances.

7. Recommendation

A team work should put a plan to upgrade the effective management of medical care in burn units in the Iraqi hospitals.

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Distribution of atopic conditions among attendants to specialized allergy center/ Kirkuk/ Iraq

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ABSTRACT

Atopy is a syndrome characterized by genetic tendency to develop allergic diseases, such as asthma, allergic rhinitis and atopic dermatitis. The risk factors of atopic diseases can be placed in two categories, namely host and environmental factors. The host factors of allergy include genetics, race, gender, age… etc. The environmental factors include exposure to environmental pollution and allergens. To define the distribution of atopic conditions (asthma, allergic rhinitis and atopic dermatitis) according to age, residence and available skin prick test. This cross-sectional study included (100) patients, representing research sample. It was conducted in specialized allergy center in Kirkuk city during the period from first January .2016 to the end of December 2016

All patients included in this study were referred from primary health centers, complaining from signs and symptoms of atopic diseases. Depending on medical history and clinical examinations, the sample was classified into (3) groups (asthma, allergic rhinitis and atopic dermatitis). Skin prick test was used to identify patients allergy to house dust mite and pollen. Regarding the distribution of samples according to residence, most patients (about 91%) were from urban areas compared with (9%) of them were from rural areas. Also, it was found that the frequency of atopic diseases decreases by age advancement. The frequency distribution of asthma, allergic rhinitis and atopic dermatitis was 49%, 26% and 25%, respectively. The skin test data revealed the frequency of 2 aeroallergen mite and pollen in all patients under study. .Hence, 65% were sensitive to house dust mite, 26% to pollen and 9% to both mite and pollen

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In conclusion this study confirmed that most patients complaining from atopic disease were from urban area. Also, the frequency of atopic diseases decreased by age advancement. The most common atopic disease was asthma followed by allergic rhinitis and atopic dermatitis. Most patients were sensitive to house dust mite.

Keywords Atopy, Aeroallergens, Skin Prick Test, Hypersensitivity.

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نسبة انتشار الحساسية الاتوبية لدى مراجعي المركز التخصصي للحساسية كركوك\ العراق

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الملخص

التأتب هي متلازمة تتميز بالميل الجيني للإصابة بأمراض الحساسية مثل الربو والتهاب الأنف التحسسي والتهاب الجلد التأتبي. يمكن وضع عوامل الخطورة للأمراض التأتبية في فئتين هما العوامل المضيفة والعوامل البيئية. تشمل العوامل المضيفة للحساسية الوراثة والعرق والجنس والعمر وما إلى ذلك. وتشمل العوامل البيئية التعرض للتلوث البيئي والمواد المثيرة للحساسية. ,الهدف من هذه الدراسة تحديد توزيع الحالات التأتبية (الربو ، التهاب الأنف التحسسي ، التهاب الجلد التأتبي) حسب العمر، الإقامة ، واختبار وخز الجلد المتوفر. وان مجموع الافراد المشمولين في هذه الدراسة المستعرضة 100 مريض أجريت الدراسة في المركز التخصصي للحساسية في مدينة كركوك خلال الفترة من أول يناير 2016 إلى نهاية ديسمبر 2016. جميع المرضى المشمولين في هذه الدراسة أحيلوا من مراكز الرعاية الصحية الأولية وكانوا يعانون من علامات وأعراض الأمراض الاتوبيه. اعتمادا على التاريخ الطبي والفحوص السريرية ، تم تقسيم المرضى إلى 3 مجموعات رئيسية: الربو، التهاب الأنف التحسسي، التهاب الجلد التأتبي. تم استخدام اختبار وخز الجلد لتحديد المرضى الذين يعانون من الحساسية لغبار غبار الطلع وحبوب اللقاح. فيما يتعلق بتوزيع المرضى حسب السكن، معظم المرضى (حوالي 91٪) كانوا من المناطق الحضرية مقارنة بـ (9٪) من المناطق الريفية. انخفاض نسبة الأمراض التأتبية مع التقدم في السن. كانت نسب الاصابة بمرض الربو والتهاب الأنف التحسسي والتهاب الجلد التأتبي 49 ٪ ، 26 ٪ 25 ٪ على التوالي. كشفت بيانات اختبار وخز الجلد للحساسيه في جميع المرضى المشمولين بالدراسة ان 65٪ اظهروا حساسية لعث

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غبار المنزل ، 26٪ لحبوب اللقاح ، و 9٪ لكل من عث غبار المنزل وحبوب اللقاح. أكدت هذه الدراسة ان معظم المرضي الذين يشكون من الامراض الاتوبيه كانوا من المناطق الحضرية ، انخفاض نسبة الامراض الاتوبيه مع ازدياد العمر ، والمرض التاتبي الأكثر شيوعا كان الربو يليه حساسية الأنف والتهاب الجلد التاتبي. اظهر معظم المرضي حساسيه لعث غبار المنزل. **الكلمات الدالة** التأتب ، المستأرجات الهوائية، اختبار وخز الجلد ، فرط الحساسية.

1.Introduction

The term “atopy” originates from the Greek word (atopos: without a place). In 1923, Coca and Cooke has introduced this term to denote the lack of position in the medical classification. Then, it has been used for classifying eczema, asthma and allergic rhinitis [1]. So, atopy refers to the predisposition to create an excessive IgE immune reaction to otherwise safe environmental materials [2]. People who suffer from atopy normally have one or more of these diseases: atopic dermatitis, allergic rhinitis or allergic asthma. Also, they have a predisposition to suffer allergic conjunctivitis, food allergies and eosinophilic esophagitis [3].

The hypersensitivity response to an allergen causes atopic reactions.

Atopic diseases demonstrate a strong genetic element. There is a study confirming that the risk of developing atopic dermatitis (3%) or atopy in general (7%) "increases by a factor of two with each first-degree family member already suffering from atopy" [4]. A strong hereditary tendency exists toward atopic diseases, particularly on the motherly part, due to the strong family evidence. Researchers have attempted to define the sensitive genes to atopy [5]. There is increasing occurrence of allergic diseases in both industrialized and non-industrialized countries. The reason for this is undefined, but a widely believed assumption is “hygiene hypothesis”. This suggests that the immune system is biased against the development of atopic disease because of infections in childhood, and that allergy is the consequence for the decrease, incidence of infection caused by improvement in sanitation and health care services.

There are other factors contributing to the development of atopic diseases, a family history is the strongest among them. Additionally, disease susceptibility is attributed to many genes comprising those controlling the production of cytokine and levels of IgE. There are environmental factors governing the expression of hereditary predisposition like smoke of

cigarette, pollutants and the bacterial incidence and viral infection [2]. International studies like "ISAAC (The International Study of Asthma and Allergies in Childhood)" show that the prevalence of atopic disease varies from one country to another and that their distribution in those countries can vary also.

Studies on migrants can highlight the complex interaction between hereditary and environmental factors that play a role in forming the atopic phenotype [6]. Allergic diseases are on the rise with common allergies affecting 10-30% of the world population at any given point of time in their lives [7]. Asthma and allergic rhinitis are among the common air-borne allergic reactions affecting nearly 300-500 million people around the world. According to researches, 300 million people suffer from asthma and 400 million people suffer from rhinitis across the globe [8].

However, data on atopy in Iraq are rare. Alsamarai et al. examined data of survey for 16,736 heterogeneous issues in (5) combined studies. The total incidence of asthma diagnosed by physician was 10.2% based on the total levels of IgE and a relatively low threshold of 100 IU/ml [9]. Alsaimary stated that in Basrah, 88.8% of people were expected to have allergy [10]. An international, cross-sectional, web-based survey was conducted in the US, Canada, United Kingdom, Germany, France, Spain, Italy and Japan.

A questionnaire was sent to adult members of online respondent panels for identifying adult atopic dermatitis among participants according to region. The percentages of prevalence were as follows: "4.9%/3.9% in the US, 3.5%/2.6% in Canada, 4.4%/3.5% in the EU and 2.1%/1.5% in Japan". Generally, the incidence of disease in males was lower than in females, and reduced by age advancement. The incidence of adult atopic dermatitis ranged from 2.1% to 4.9% across countries [11].

2.Research Objective

To determine the distribution of atopic conditions (asthma, allergic rhinitis and atopic dermatitis) according to age, residence and available skin prick test.

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3.Patients and methods

This is a cross-sectional study carried out in specialized Allergy and Immunology center in Kirkuk city during the period from first of January 2016 to the end of December 2016. A total of 100 patients were included in this study from both genders. They were selected as a convenience sample. Their ages were stratified according to Ministry of Health (MOH) official classification (group A: 1-14 years; group B: 15-29 years; group C: 30-49 years; group D: 50-69 years, and group E: ≥70 years), obtained from the Ministry of Health Records of the center as age ranging from (1 year-≥70 year), residence (urban and rural).

All patients included in this study were referred from primary health centers to allergy specialized center, complaining from signs and symptoms of atopic conditions (allergic rhinitis, atopic dermatitis and asthma). Diagnosis of patients with atopic dermatitis was based on medical history (personal history of other allergic diseases and family history of atopic diseases) and criteria of atopic dermatitis according to Hanifin and Rajika [12]. Diagnosis of patients with asthma was based on medical history and clinical examination, including positive family history of asthma and atopic diseases, personal history of asthma and atopic diseases.

Clinical diagnosis of asthma is often promoted by symptoms, such as recurrent episodes of breathlessness, chest tightness, wheeze, cough, usually worsens at night and early morning. Chest examination was done using stethoscope (sound of wheezing during normal breathing or prolong phase of forced exhalation) with the limitation of lack of pulmonary function test. Diagnosis of allergic rhinitis largely depended on accurate history and clinical examination, personal history of atopic diseases, history of episodic rhinorrhea, sneezing, obstruction of nasal passage with lacrimation.

In addition to summarizing the history on aggravating risk factors like house dust mite, pollen, grass, animal dander and irritants like strong perfumes and tobacco smoke. It is useful to identify the trigger and try to avoid it. After diagnosis of patients, skin prick test was used to identify allergies to pollen from Stallergenes pharmaceutical company (France, established in 1962) and house dust mite allergen produced in Iraq.

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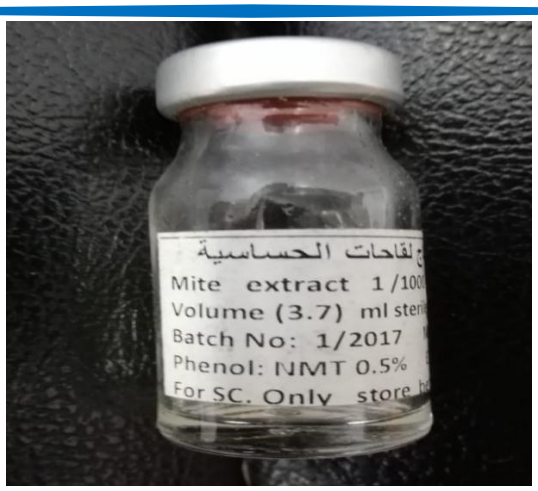

Figure (1): House dust mite vial

Skin prick testing (SPT) is a reliable technique for diagnosing IgE-mediated allergic disease in patients suffering from asthma, rhino-conjunctivitis, atopic dermatitis, urticaria and suspected food and drug allergy. It is minimally invasive test, inexpensive and its results are immediately available. In 1959, Helmtraud Ebruster has first published a study about SPT [13]. SPT has helped to diagnose the underlying cause of allergic diseases, and is required to recommend appropriate prophylaxis for immunotherapy [14].

Usually, skin prick tests are performed on forearm, and the range between tow prick tests should be 2 cm to avoid cross-contamination [15]. The location of each allergen can be marked with a pen. The application of tests should be to the palmar side of the forearm, about 2 – 3 cm from the wrist and the antecubital fossa. A drop of each test solution must be positioned on the skin in the same order for each patient tested and directly pricked [16]. After 20 minutes, the contours of the wheal are encircled with a pen and transferred to a record sheet by translucent tape [17]. The measurement of the largest wheal diameter of each specific test was done. Hence, the positive result indicates that the wheal is ≥ 3 mm [18].

4.Results and Calculations

The current study investigated allergic condition among 100 patients suffering from asthma, allergic rhinitis and atopic dermatitis. Regarding the distribution of sample according to residence, 45% of patients with asthma were from urban area in comparison to 25% of patients with allergic rhinitis and 22% of them suffering from atopic dermatitis.

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While about 4% of asthmatic patients were from rural area in comparison to 2% of allergic rhinitis patients and 3% of patients with atopic dermatitis (as shown in table 1).

Table (1): correlation between residence and allergic conditions among 100 patients

Residence / Allergic Conditions	Urban	Percent	Rural	Percent	Total	Percent
Asthma	45	45%	4	4%	49	49%
Allergic rhinitis	24	24%	2	2%	26	26%
Atopic dermatitis	22	22%	3	3%	25	25%
Total	91	91%	9	9%	100	100%

Table (2) shows the correlation of allergic conditions and age groups. In the current study, the sample was classified into (5) groups according to age, as follows: group A (1-14 year), group B (15-29 years), group C (30-49 years), group D (50-69 years) and group E (≥70 years). The percentage of allergic condition distribution among patients in group A was 12%; while in other groups B, C, D and E was (31%, 44%, 10%, 3%), respectively.

Table (2): correlation between age and allergic conditions

Age	Allergic conditions	Percent
Group A 1-14	12	12%
Group B 15-29	31	31%
Group C 30-49	44	44%
Group D 50-69	10	10%
Group E ≥70	3	3%
Total	100	100%

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Figure (2) shows the frequency distribution of allergic conditions among 100 patients included in this study. Percentage of asthmatic patients was 49% compared to 26% allergic rhinitis and 25% atopic dermatitis.

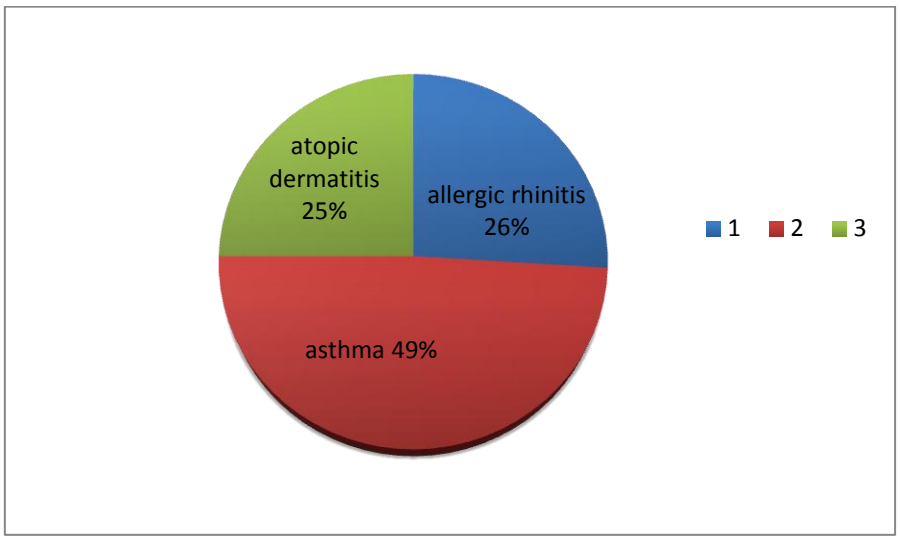

Figure (2): frequency distribution of allergic conditions

In this study, the frequency of 2 aeroallergen was tested among 100 patients. The result showed that in asthmatic patients, there were mite 33%, pollen 12% and both of them 3%. While in allergic rhinitis patients, there were mite 16%, pollen 10% and both of them 1%. Then, in patients with atopic dermatitis, there were mite 16%, pollen 4% and both of them 5%) (See table 3).

Table (3): frequency of 2 aeroallergen among 100 patients tested for allergic prick test

Allergic Conditions	Mite	Percent	Pollen	Percent	Both	Percent	Total	Percent
Asthma	33	33%	12	12%	3	3%	48	48%
Allergic Rhinitis	16	16%	10	10%	1	1%	27	27%
Atopic Dermatitis	16	16%	4	4%	5	5%	25	25%
Total	65	65%	26	26%	9	9%	100	100%

5.Conclusion

Regarding the outcomes of this study, it can be concluded that most allergic patients were living in urban areas compared with rural areas. Frequency of atopic diseases decreased by age advancement. Most patients visiting specialized allergy center were suffering from asthma followed by allergic rhinitis and atopic dermatitis. Finally, most patients included in this study were allergic to house dust mite.

6.Discussion

In this study, correlation of allergic conditions with residence showed that about 91% of patients in all three groups (asthma, allergic rhinitis and atopic dermatitis) were living in urban area compared with 9% living in rural area. In developing countries, studies frequently report that allergic diseases occur in rural areas with low rates in comparison to urban places. This is because of the preventive effects of environmental exposures like rural lifestyle [19]. In Africa and Asia, studies proved the increase of atopic diseases in both urban and rural places, which reduces the urban-rural prevalence gap [20]. Studies have assumed that the increasing prevalence of allergic diseases could be related to processes of urbanization, particularly with the change from rural to more modern urban lifestyles [19].

Moreover, the increase in occurrence of respiratory allergic diseases is associated with high levels of vehicles emissions. Similarly, the risk of allergic sensitization is increasing because of using modern oils, which might be a causative factor for the increased incidence of allergic disorder [21]. The Hygiene hypothesis suggests that reduced microbial exposure in early life leads to increasing incidence of allergic sensitizations and diseases [22]. The results of this study agree with those found in the study of Kilpeläinen M. et al. that in childhood, farm environment inhibits the development of allergies [23]. Also, they are in agreement with the findings of Nicolaou N. et al. that allergies are prevailing in rural Mongolia with low rates and that their prevalence increases with increasing urbanization [24]. They also agree with the results of the study of Lee SY et al. (2012) that the incidence of allergic diseases and atopy was greater in urban Korean children [25].

However, the current results disagree with Guner B. et al. (2011) that the prevalence of allergic diseases in rural and urban areas is similar [26]. Currently, there is an increased exposure to chemicals from various sources, particularly in industrial countries. Some chemicals are emitted as exhaust fumes of vehicles, industrial dust and insecticides. Another

hypothesis proposes that the increasing of atopic disease in urban areas may partly be attributed to a reduced exposure to allergens including pollens (resulted from the change in urban lifestyle, for example, spending much time at home and far from regions rich in natural sources of allergens), resulting in a lower tolerance to pollens: "a reverse case of immunotherapy" [27].

Age advancement is related to adjustments of the immune system, identified as immunosenescence. This might contribute to reduce the incidence of allergic diseases in the aged people. In the current study, atopic diseases are found to be decreased by age advancement. Many studies reveal that the prevalence of atopy is decreased by age advancement either in samples of general people or people with no allergy-related symptoms.

The National Health And Nutrition Examination Survey (NHANES) II is the largest study on skin prick/ puncture. It includes 16204 participants from the non-institutionalized population in the US, who have undergone a skin prick test to (8) allergens. Hence, 30% of persons whose ages range between 12–24 years have at least one positive skin test. The occurrence of positive reaction has declined to 8% in individuals aged 65–74 [28]. The current results agree with those found by Duaine R. Jackola et al. that there was a decline in total serum IgE by age advancement, and the incidence rates of relative atopy were slightly lower among those older than 60 years [29].

Based on literature review, only (2) studies indicated the absence of decrease in the incidence of atopy by age advancement. Yet, there are limitations in both studies. The incidence of allergic asthma in old people was identified in a work conducted in Baltimore, USA on 80 asthmatics older than 65 years. It was found that 75% of participants were having at least one sensitization to common airborne allergens as measured by skin pick test [30]. The second study done by Crawford W. W. et al. was a cross-sectional survey applied to adult asthmatics and patients with allergic rhinitis to evaluate the effects of age on atopy. They found the increase of atopic disease by age advancement [31].

In this study, the frequency distribution of asthma, allergic rhinitis and atopic dermatitis was 49%, 26% and 25%, respectively. Jobran M. Alqahtani found that the total incidence of asthma diagnosed by physician, allergic rhinitis and atopic dermatitis was 27.5%, 6.3% and 12.5%, respectively in Saudi Arabia [32]. In a cross-sectional study done by Dennis RJ in Colombia 2009–2010, the existing incidence of symptoms of asthma was 12% (95% CI, 10.5-13.7) with 43% (95% CI, 36.3-49.2) requiring a visit to emergency department

or hospitalization during the previous 12 months. Asthma diagnosed by physician was 7% (95% CI, 6.1-8.0). The existing incidence of symptoms of allergic rhinitis was 32% (95% CI, 29.5-33.9) and symptoms of atopic eczema was 14% (95% CI, 12.5-15.3) [33].

Aeroallergens are substances present in the air that, once inhaled, stimulate an allergic response in sensitized individuals. These substances include tree, grass, weed pollen, molds and other allergenic proteins associated with animal dander, dust mites and cockroaches [34]. House dust mites and pollens play a major role in allergic disorders. In this study, data of skin prick test revealed the frequency of 2 aeroallergens house dust mite and pollen among 100 patients included in this study. Hence, 65% of patients had positive hypersensitivity reaction to house dust mite in comparison to 26% to pollen and 9% to both mite and pollen. In asthmatic patients group, the rates were as follows: mite 33%, pollen 12% and both mite and pollen 3%. While in allergic rhinitis patients, they were as follows: mite 16%, pollen 10% and both of them 1%; and in patients with atopic dermatitis, they were represented as: mite 16%, pollen 4% and both of them 5%.

The current result agree with that of Navpreet K. G et al. who examined the prevalence of house dust mite and pollen among allergic diseases in India. They found that 38.23% of asthmatic patients were sensitive to mite, 29.41% to pollen and 32.35% to both mite and pollen. In patients with allergic rhinitis, about 37.5% of them were allergic to mite; while 34.36% of patients were allergic to pollen and 31.25% were allergic to both of them. In patients with atopic dermatitis, about 41.66% of them were allergic to house dust mite, 29.17% were allergic to mite and 29.17% were allergic to both mite and pollen [35].

However, data about atopic disease in Iraq are very rare. Alwan and Al-Dulaimy (2009) tested 391 patients suffering from allergic rhinitis and/or allergic asthma visiting an allergy clinic in Baquba. The most common sensitizations were house dust mite (25.3% of patients tested), Bermuda grass (23%) and mixed grasses (19.6%) [36]. Bassam TS et al. examined 62 patients suffering from allergic rhinitis visiting the allergic clinic at Tikrit

Teaching Hospital with 18 allergen extracts. Three patients (5%) were non-sensitized, 8 (13%) were monosensitized and 51 (82%) were sensitized to two or more allergens. The most notable sensitizations were Bermuda grass (66% of patients), grass mix (28%), molds (at least 34%), *Dermatophagoides pteronyssinus* (18%) and *Dermatophagoides farinae* (9%) [37]. In Mosul, a study about the effect of different factors on allergic patients was done by

Zakaria BB and Basima AA. They found that the overall sensitization rate in intradermal tests was 44% for house dust mite and 38% for grass pollen [38].

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Immunological Aspects of ELISA Positive PCR Negative Newly Diagnosed Hepatitis C Patients in Kirkuk Province

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ABSTRACT

This study was conducted in Kirkuk city from June 2018 to March 2019. The number of hepatitis patient understudy were 40 newly diagnosed hepatitis C whose ages were between 20-75 years old. The purpose of this study was to evaluate the effect of interleukin (IL)-23 and IL-27 in the clearance of HCV in the first months of infection. The control group who were matched to the patients studied, included 40 individuals who admitted to the blood bank for blood donation, for the molecular test of HCV Real-time quantitative test and serum IL-23 and IL-27 by ELISA and biochemical estimation if liver function tests. The study demonstrated that 75 % of patients with acute hepatitis C who had anti-HCV as detected by ELISA revealed positive results by RT-PCR and 25% yield negative result by RT-PCR. The study showed that 66.67% (21 of 30) of PCR + acute hepatitis patients C were infected by genotype 4 of HCV. Regarding the relation of IL-23 with HCV infection, the present study showed that the highest mean of IL-23 level was recorded among PCR –ve patients with acute hepatitis C (23.8 pg/ml) followed by PCR +ve patients with acute hepatitis C (14.7 pg/ml) and the lowest means were found in the control (4.6 pg/ml) group with highly significant differences among the groups. The present study showed that the highest mean of IL-27 level was recorded among PCR –ve patients with acute hepatitis C (35.7 pg/ml) followed by PCR +ve patients with acute hepatitis C (20.5 pg/ml) and the lowest mean was found in the control group (11.9 pg/ml) with highly significant differences. The study showed a strong negative correlation of IL-23 and IL-27 with viral load and ALT in patients with acute hepatitis C. IL-23 and IL-27 levels were increased significantly in HCV patients with –ve PCR result. It was concluded that the increased levels of IL-23 and IL-27 in PCR negative hepatitis patients refer to the good immune response of patients toward the virus and HCV ELISA positive patient does not necessarily have viral hepatitis C.

Keywords: IL-23; IL-27; acute HCV; RT-PCR; HCV Clearance.

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الجوانب المناعية لمرضى التهاب الكبد الفايروسي نوع C والمشخصين ايجابياً بتقنية الـ ELISA وسلبياً بتقنية الـ PCR في محافظة كركوك

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الملخص

أجريت هذه الدراسة في مدينة كركوك في الفترة من يونيو 2018 إلى مارس 2019. وكان عدد المصابين بمرض التهاب الكبد الفيروسي نوع C 40 شخصًا تم تشخيصهم حديثًا والذين تتراوحت أعمارهم بين 20 و 75 عامًا. وكان الغرض من هذه الدراسة هو تقييم تأثير الانترلوكين 23- (IL) و IL-27 في إزالة فيروس HCV من المرضى في الأشهر الأولى من الإصابة. شملت المجموعة مجموعة السيطرة 40 شخصًا من التبرع بالدم ، تضمنت الدراسة الكشف الكمي الجزيئي لفيروس الـ HCV والنوع الجيني له فضلاً عن قياس مستوى IL-23 و IL-27 بواسطة ELISA وتقدير وتقدير مستوى انزيم الكبد الـ ALT. أظهرت الدراسة أن 75 ٪ من المرضى الذين يعانون من التهاب الكبد الفيروسي نوع C الحاد الذي كان لديهم اجسام مضادة للفيروس بتقنية الـ ELISA كانت نتيجتهم إيجابية بطريقة الـ RT-PCR و 25 ٪ نتيجة سلبية عن طريق RT-PCR. وأظهرت الدراسة أن 66 ٪ من PCR + مرضى التهاب الكبد الفايروسي الحاد C أصيبوا بالنمط الوراثي 4. فيما يتعلق بعلاقة IL-23 بالعدوى بفيروس التهاب الكبد الوبائي ، أوضحت الدراسة الحالية أن أعلى متوسط لمستوى IL-23 تم تسجيله بين مرضى PCR - الذين يعانون من التهاب الكبد الوبائي الحاد (23.8 بيكوغرام / مل) يليه مرضى PCR + ve المصابين بالتهاب الكبد الحاد. وأن أدنى معدل كان في مجموعة السيطرة (4.6 بيكوغرام/ مل) مع وجود اختلافات كبيرة للغاية بين المجموعتين. أوضحت الدراسة الحالية أن أعلى متوسط لمستوى IL-27 تم تسجيله بين مرضى PCR - المصابين بالتهاب الكبد الوبائي الحاد (35.7 بيكوغرام / مل) ، يليهم مرضى PCR + ve المصابين بالتهاب الكبد الوبائي الحاد (20.5 بيكوغرام / مل) وأدنى متوسط كان في مجموعة السيطرة. وأظهرت الدراسة وجود علاقة سلبية قوية لـ IL-23 و IL-27 مع ALT في المرضى الذين يعانون من التهاب الكبد الوبائي الحاد C. IL

ويستنتج من الدراسة أن زيادة مستويات IL-23 و IL-27 في مرضى التهاب الكبد السلبي PCR تشير إلى استجابة مناعية جيدة وأن المريض المشخص ايجابياً بتقنية الـ HCV ELISA ليس بالضرورة ان يكون مصاب التهاب الكبد الفيروسي C

الكلمات الدالة: انترلوكين 23، انترلوكين 27، التهاب الكبد الفيروسي نوع C الحاد.

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1. Introduction

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV): the virus can cause both acute and chronic hepatitis, ranging in severity from a mild illness lasting a few weeks to a serious, lifelong illness. Hepatitis C is a major cause of liver cancer [1]. The hepatitis C virus is a blood-borne virus: the most common modes of infection are through exposure to small quantities of blood [2]. This may happen through injection drug use, unsafe injection practices, and unsafe health care, transfusion of unscreened blood and blood products, and sexual practices that lead to exposure to blood [3]. Globally, an estimated 71 million people have chronic hepatitis C virus infection. Infection with HCV has a significant global impact, it infects more than 170 million people worldwide. Infections with HCV are pandemic, the World Health Organization (WHO) estimates a worldwide prevalence of 3%[4]. The natural history of HCV infection has been very difficult to assess because of the usually silent onset of the acute phase as well as the frequent paucity of symptoms during the early stages of chronic infection [5]. Approximately 75%–85% of infected patients do not clear the virus by 6 months, and chronic hepatitis develops. Antiviral medicines can cure more than 95% of persons with hepatitis C infection, thereby reducing the risk of death from cirrhosis and liver cancer, but access to diagnosis and treatment is low[6]. There is currently no effective vaccine against hepatitis C; however, research in this area is ongoing. WHO's updated 2018 guidelines recommend therapy with pan-genotypic direct-acting antivirals (DAAs). DAAs can cure most persons with HCV infection, and treatment duration is short (usually 12 to 24 weeks), depending on the absence or presence of cirrhosis. Interleukins are a group of cytokines (secreted proteins/ signaling molecules) that were first seen to be expressed by white blood cells (leukocytes) [7]. They are pivotal in managing the positive and negative signals required to generate and shape a protective inflammatory response. The function of the immune system depends in a large part on interleukins, and rare deficiencies of a number of them have been described, all featuring autoimmune diseases or immune deficiency. Recent studies revealed that IL-27 plays an important role in CD8+ T cells [1]. Cytotoxic T lymphocytes (CTLs) also play a critical role in the control of various cancers and infections, and therefore the molecular mechanisms of CTL generation are a critical issue in designing antitumor immunotherapy and vaccines. IL-27 is capable of inhibiting replication of HCV, Since IL-27 inhibits replication of HIV-1 and HCV, achieving a better understanding of the

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role of IL-27 in regulation of gene activation and mechanism of the antiviral effect may help in the development of a novel immunotherapeutic strategy for HCV and HCV/HIV confection as well as for other infectious diseases [8]. The purpose of this study was to evaluate the effect of interleukin (IL)-23 and IL-27 in the clearance of HCV in the first months of infection.

2.Materials and Methods

This study was conducted in Kirkuk city from June 2018 to March 2019. The number of hepatitis patient understudy were 40 newly diagnosed hepatitis C whose ages were between 20-75 years old. The control group who were matched to the patients studied, included 40 individuals who visited the blood bank for blood donation. The study included the molecular quantitative detection of HCV RNA and genotype by HCV Real-time and serum IL-23 and IL-27 by ELISA and biochemical estimation if liver function tests. Five ml of blood was collected from each patient and control enrolled in the study, 2ml of collected blood was added to EDTA tubes for estimation and detection of HCV genotype and viral load by real time PCR. The 2nd part, 3 ml of blood were left for clot and centrifuged 2 times for isolate pure sera, sera the aspirated and transferred into new Eppendorf tubes and labeled for determination of **IL-23 and IL-27** by enzyme linked immunosorbent assay (ELISA) technique and biochemical to determine the level of alanine aminotransferase (ALT).

3.Results and Calculations

Table 1 shows that 75 % of patients with acute hepatitis C who anti-HCV had as detected by ELISA revealed positive results by RT-PCR and 25% yield negative results by RT-PCR.

Table 1: Comparison between ELISA and PCR in the testing of HCV patients.

Anti-HCV ELISA positive	**Real-time PCR assay**			
	Positive		Negative	
	No.	%	No.	%
Newly diagnosed HCV (n: 40)	30	75	10	25

The study showed that the high rates of patients 66.67% (21 of 30) of PCR + acute hepatitis patients C were infected by genotype 4 of HCV, Figure 1

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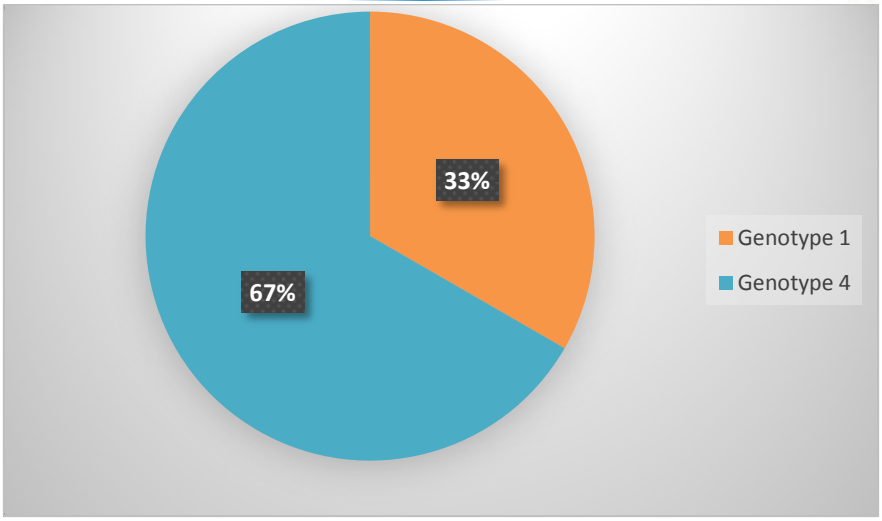

Figure 1: Distribution of HCV genotype

Regarding the relation of IL-23 with HCV infection, the present study showed that the highest mean of IL-23 level was recorded among PCR –ve patients with acute hepatitis C (23.8 pg/ml) followed by PCR +ve patients with acute hepatitis C (14.7 pg/ml) and the lowest means were found in the control (4.6 pg/ml) group with highly significant differences among the groups.. Table 2.

Table 2: Level of IL-23 in PCR-negative and PCR-positive patients with acute hepatitis C and the control group.

IL-23 level pg/ml	Patients with acute hepatitis C		Control	*P. value*
	PCR –ve (n:10)	PCR +ve (n:30)		
Mean	23.8	14.7	4.6	0.001
SD.	2.8	2.1	1.7	

The present study showed that the highest mean of IL-27 level was recorded among PCR –ve patients with acute hepatitis C (35.7 pg/ml) followed by PCR +ve patients with acute hepatitis C (20.5 pg/ml) and the lowest mean was found in the control group (11.9 pg/ml) with highly significant differences Table 3

Table 3: Level of IL-27 in PCR-negative and PCR-positive patients with chronic hepatitis C and the control group.

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IL-27 level pg/ml	Patients with chronic hepatitis C		Control	*P. value*
	PCR –ve (n:10)	**PCR +ve** (n:30)		
Mean	35.7	20.5	11.9	0.001
SD.	5.7	4.1	3.3	

The study showed strong negative correlation of ALT with IL-23 and IL-27 levels in patients with acute hepatitis C and ALT levels, Figure 2

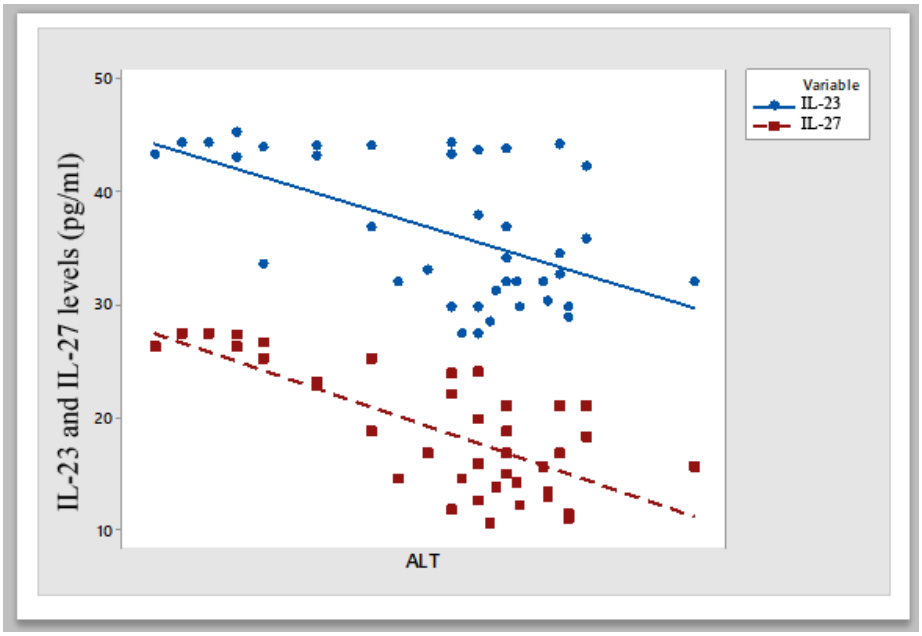

Figure 2: Correlation of ALT with IL-23 and IL-27 levels

4.Conclusion

IL-23 and IL-27 levels were increased significantly in HCV patients with –ve PCR results. The increased levels of IL-23 and IL-27 in PCR negative hepatitis patients refer to the good immune response of patients toward the virus. HCV ELISA positive does not necessarily have viral hepatitis C.

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5. Discussion

The basic purpose of this study was to find out the association of IL-23 and IL-27 with viral and laboratory factors such as viral load, genotypes and biochemical outcomes. The data indicated a higher level of IL-23 in patients compared to controls. However, it was not shown a significant difference between 1a and 3a HCV-infected patients. Also, the serum level of IL-23 in untreated patients did not differ compared to the untreated patients, though results demonstrate higher levels of IL-23 in patients without therapy. It seems that IL-23 may be involved in hepatic necro-inflammatory responses, as previous studies show [8, 9]. Matar *et al.* revealed IL-12p40 as IL-23 subunit is higher in patients with chronic HCV infection than healthy individuals that are clearer in 1a, 2 and 4 HCV-infected patients [10]. This was confirmed by some other studies [11, 12]. The above studies imply that IL-23 is as cytokine, which can augment pathogenesis of chronicity in the infection status that is produced by activated antigen-presenting cells such as dendritic cells and macrophages. This study demonstrated a positive correlation between IL-23 with viral load in 1a and 3a HCV-infected patients, for the first time. This finding can support prominent IL-23 roles in development of HCV genotypes I- and III-related chronic liver disease. Furthermore, according to the difference in viral load between untreated and treated groups, it seems that IL-23 can be associated with high IL-23 expression. IL-27 is known to be related both with the development of Th1 responses and regulation of inflammatory response in monocytes/macrophages [10]. According to findings of Hafez et al [13], enhanced IL-12 in HCV- infected patients, associate with HCV infection, was reported. Between all of the HCV-infected patients, the only positive significant correlation between IL-23 levels with ALT level in 1a-infected patients was seen. Increased aminotransferases levels can be used as a predictor for disease prognosis and an indicator of liver cell injury [14]. Thus, a positive correlation of ALT with IL-23 in 1a-infected patients can be used as a prognostic marker for liver damage. Kouchaki *et al* [15] demonstrated that an increase in ALT is mostly associated with elevated IL-23 level in HCV 2-, 1a- and 4-infected genotypes that are concordant with our study. It seems that along with HCV infection, liver cells are influenced by the immune system, continuously. Slowly liver damage leads to liver enzyme increase. On the other hand, an immune response against viruses causes increased cell-mediated immunity, especially IL-

12 family. As regards, IL-23, as a part of the IL-12 family, can increase along with viral load in order to respond to virus in chronic liver disease. According to this hypothesis, early treatment approaches, regards to kind of HCV genotype, can be much beneficiary for the patients; when liver cells have not been under pressure by cell-mediated immune responses [11,13].

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Use of procalcitonin and C-reactive protein as predictors and diagnostic tool of acute appendicitis

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ABSTRACT

The aim of the study was to evaluate the role of PCT and CRP in patients with acute appendicitis. The study was conducted in Kirkuk city for the period from January, 2018 to April, 2018 on 50 patients with acute appendicitis with age group 15-54 years. Based on the clinical signs of patients, diagnostic tests and sonar rays, the number of patients with acute appendicitis was assigned to the present study. The study also included 40 healthy persons as control group . The study included the collection of 3 ml of venous blood for identification and measurement of PCT by using ELISA technique and CRP test by using Commercial manual kits. The study also included taking of full information from cases like living situation, age . The study indicated that the maximum mean of PCT was observed in patients with acute appendicitis as compared with healthy persons (17.31±0.51 versus 6.22±0.34 ng/ml) with highly significant difference between the two groups. The maximum rate of CRP +ve was observed in patients with acute appendicitis as compared with healthy persons (84% versus 10% ng/ml) with highly significant difference between the two groups. The study found that means of WBCs count and neutrophils count were significantly higher in patients with acute appendicitis as compared with healthy persons. The study showed that there was positive correlation of PCT and CRP with each of WBCs and neutrophil counts and a strong positive correlation of PCT with CRP in patients with acute appendicitis. The highest rate of patients with acute appendicitis (40%) was in the age group 15-24 years followed by the age group 25-34 years while the lowest rate was in the age group 45-54 years. It was concluded that PCT and CRP considered as in important non-invasive diagnostic tool of acute bacterial appendicitis

Key words: PCT; CRP; Diagnostic tool; Appendicitis.
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استخدام البروكالسيتونين والبروتين التفاعلي C كعامل للتنبؤ وأداة تشخيصية للالتهاب الزائدة الدودية الحاد

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الملخص

كان الهدف من الدراسة هو تقييم دور البروكالسيتونين والبروتين التفاعلي C في المرضى الذين يعانون من التهاب الزائدة الدودية الحاد. أجريت الدراسة في مدينة كركوك للفترة من يناير 2018 إلى أبريل 2018 على 50 مريضا مصاباً بالتهاب الزائدة الدودية الحاد من الفئة العمرية 15–54 سنة. وتم تشخيص الحالات بناءً على العلامات السريرية للمرضى والاختبارات التشخيصية وأشعة السونار ومن ثم تعيين عدد المرضى الذين يعانون من التهاب الزائدة الدودية الحاد في هذه الدراسة. وشملت الدراسة أيضا 40 شخصا صحيحا كمجموعة السيطرة. شملت الدراسة جمع 3 مل من الدم الوريدي لتحديد وقياس البروكالسيتونين باستخدام تقنية ELISA واختبار البروتين التفاعلي C . وشملت الدراسة أيضا أخذ معلومات كاملة من حالات مثل الوضع المعيشي ، والعمر. أشارت الدراسة إلى أن اعلى معدلات البروكالسيتونين لوحظت في المرضى الذين يعانون من التهاب الزائدة الدودية الحاد مقارنة مع الأشخاص الأصحاء (17.31 ± 0.51 مقابل 6.22 ± 0.34 نانوغرام / مل) مع وجود فرق كبير للغاية بين المجموعتين. وقد لوحظ أن الحد الأقصى لمعدل CRP + ve في المرضى الذين يعانون من التهاب الزائدة الدودية الحاد بالمقارنة مع الأشخاص الأصحاء (84 ٪ مقابل 10 ٪ نانوغرام / مل) مع اختلاف كبير للغاية بين المجموعتين. ووجدت الدراسة أن معدل تعداد كريات الدم البيضاء وعدد الخلايا العدلات كانت أعلى بكثير في المرضى الذين يعانون من التهاب الزائدة الدودية الحاد بالمقارنة مع الأشخاص الأصحاء. وأظهرت الدراسة أن هناك علاقة إيجابية للبروكالسيتونين و CRP مع كل من WBCs وتعداد الخلايا العدلة وعلاقة إيجابية قوية من البروكالسيتونين مع CRP في المرضى الذين يعانون من التهاب الزائدة الدودية الحاد. كان أعلى معدل للمرضى الذين يعانون من التهاب الزائدة الدودية الحاد (40 ٪) في الفئة العمرية 15–24 سنة تليها الفئة العمرية 25–34 سنة في حين أن أدنى معدل كان في الفئة العمرية 45–54 سنة. يستنتج من الدراسة أن البروكالسيتونين و البروتين التفاعلي C يعتبران من اهم عوامل التنبؤ والتشخيص للالتهاب الزائدة الدودية الحاد

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الكلمات الدالة البروكالسيتونين ؛ البروتين التفاعلي C ; أدوات التشخيص. التهاب الزائدة الدودية.

1. Introduction

Appendectomy for acute appendicitis is the most normally performed crisis activity on the planet. A ruptured appendix is an illness of the youthful with 40% of cases happening in patients between the ages of 10 and 29 years[1]. Perioperative wide range anti-infection agents are normally utilized, permitting freedom of vigorous and anaerobic microbes. While anti-microbials are observationally focused at the standard stomach related greenery, there is poor agreement on the length of anti-toxin treatment, and most foundations have embraced their very own guidelines[2]. All things considered, suitable shortening of the treatment term might be a vital viewpoint restricting anti-toxin obstruction, costs, span of medical clinic remain, and improving patient's results [3]. The utilization of biomarkers to survey the treatment adequacy on diseases is normally known, however a particular parameter to screen the term of anti-infection agents has been deficient. Procalcitonin (PCT) has been appeared to increment during extreme contamination and endotoxaemia [4]. PCT might be a valuable apparatus in the early analysis of postoperative sepsis. Early analysis could permit early objective coordinated treatment which has been appeared to diminish mortality in extreme sepsis[5]. CRP is an intense stage reactant, and CRP level estimations are as often as possible used to help in the finding of bacterial diseases. CRP is blended by the liver, for the most part in light of IL-6, which is created during contamination as well as in numerous kinds of irritation [6]. It ties to polysaccharides in pathogens, enacting the traditional supplement pathway. The announced indicative exactness of PCT and CRP for the analysis of bacterial contaminations has differed crosswise over studies[7]. The aim of the study was to assess the role of PCT and CRP in patients with acute appendicitis.

2.Material and methods

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The study was conducted in Kirkuk city for the period from January, 2018 to April, 2018 on 50 patients with acute appendicitis with age group 15-54 years. Based on the clinical signs of patients, diagnostic tests and sonar rays, the number of patients with acute appendicitis was assigned to the present study. The study also included 40 healthy persons as control group . The study included the collection of 3 ml of venous blood for identification and measurement of PCT by using ELISA technique (KomaBiotech, Co, USA) and CRP test by using Commercial manual kits. The study also included taking of full information from cases like living situation, age .2

Statistical test.2.1

The study and analysis of the results was carried out using SPSS version 22.1, which included the extraction of the P. value, which indicates the level of the difference between all the subjects in the study. P<0.01 considered significant.

3. Results and Calculations

Table 1 shows that the maximum mean of PCT was observed in patients with acute appendicitis as compared with healthy persons (17.31±0.51 versus 6.22±0.34 ng/ml) with highly significant difference between the two groups.

Table 1: Relation of PCT with appendicitis .

PCT (ng/ml)	Patients with acute appendicitis	Control group	P. value
No.	50	40	0.001
Mean	17.31	6.22	
SD.	0.51	0.34	

Table 2 shows that the maximum rate of CRP +ve was observed in patients with acute appendicitis as compared with healthy persons (84% versus 10% ng/ml) with highly significant difference between the two groups.

Table 2: Relation of CRP with appendicitis.

CRP (> 6 mg/dl)	Patients with acute appendicitis		Control group		P. value
	No.	%	No.	%	0.001
Positive	42	84	4	10	

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Negative	8	16	36	90	
Total	50	100	40	100	

Fig.1 shows that means of WBCs count and neutrophils count were significantly higher in patients with acute appendicitis as compared with healthy persons

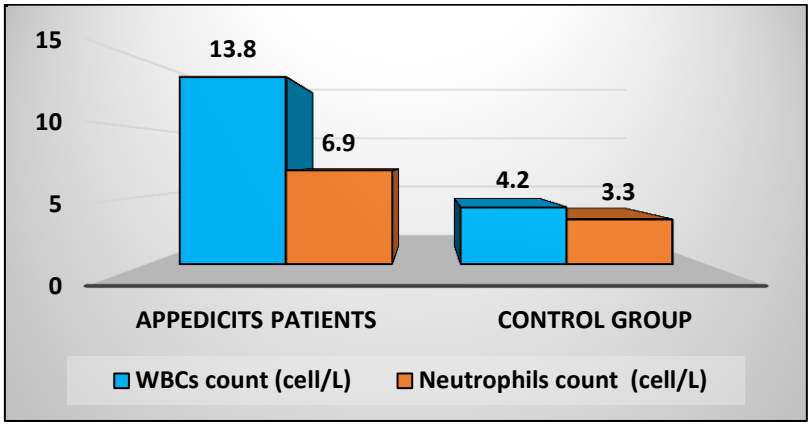

Fig. 1: Means of WBCs count and neutrophils count in the studied group

The study showed that there was positive correlation of PCT and CRP with each of WBCs and neutrophil counts and a strong positive correlation of PCT with CRP in patients with acute appendicitis Table 3.

Table 2: Correlation of PCT and CRP with WBCs and neutrophil counts appendicitis.

Parameter	Parameter	r. value	Parameter	Parameter	r. value
PCT	CRP	0.78	CRP	WBCs count	0.31
PCT	WBCs count	0.38	CRP	Neutrophils count	0.33
PCT	Neutrophils count	0.44	CRP		

Fig. 2 shows that the highest rate of patients with acute appendicitis (40%) was in the age group 15-24 years followed by the age group 25-34 years while the lowest rate was in the age group 45-54 years.

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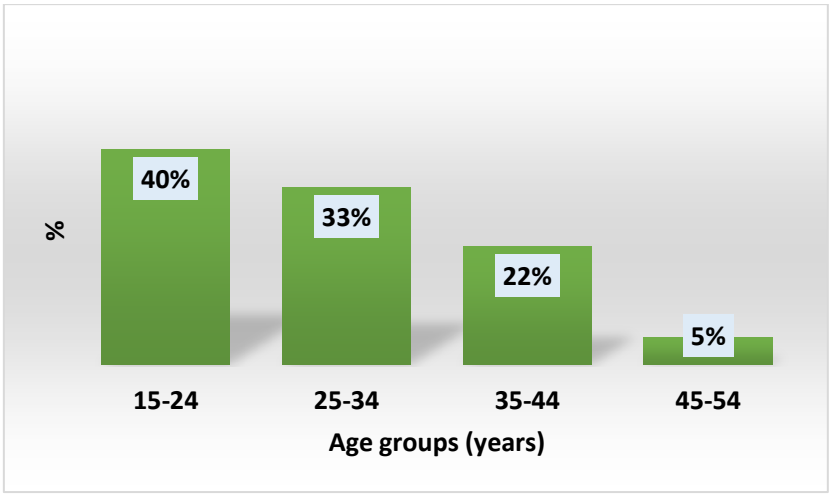

Fig. 2: Distribution of patients with acute appendicitis according to their age

4.Conclusion

It was concluded that PCT and CRP considered as in important non-invasive diagnostic tool of acute bacterial appendicitis

5.Discussion:

Many studies have shown that patients undergoing surgery, including appendectomy, are the most frequently exposed to bacterial infections that have exacerbated the condition and subsequently surgeries [1]. There are also ongoing efforts to use chemical and protein indicators to diagnose inflammation of the glands and membranes in various organs of the body and for the early diagnosis of these diseases as well as the serious endeavor to avoid and surgeries [5,8]. Numerous studies have shown that PCT level was high in the ideology of bacterial origin, especially in infected people as in our study patients [9-11]. It was in sync with elevated leukocytes and neutrophils in those patients compared with normal subjects [12-14]. Other studies conducted in different regions in the media have shown that PCT, CRP, or both can be used for freedom from bacterial pathogens and that there is a positive significant correlation between the increase in their level in patients with appendicitis [4,9]. Kaya *et al* [15] demonstrated in similar work that PCT accompanied by total WBC count were good predictor for diagnosis of acute appendicitis and they also found that people below 30 years

were more frequently associated with appendicitis than above 30 years old. Additionally Yu et al [16] in meta-analysis study used procalcitonin, C-reactive protein and white blood cell count for suspected acute appendicitis and found positive correlation for mentioned parameters in patients and recommended for using in diagnosis of the disease.

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Study of The Possible Risk Factors Attributed to Breast Cancer in Alwasity Secondary School Kirkuk /Iraq

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ABSTRACT

Breast cancer is a common health problem affecting 20% of population.
One of the risk factors affecting the causation of development of breast cancer is the environmental pollution by chemical and radiation .
The presumptive theory lying behind is that ionizing radiation has genotoxic affect causing damage to DNA and mutation with gene alteration that increase the risk in both male and female
The breast cancer risk includes being female ,getting older ,and DNA mutation .the study was carried out in Al-wasity secondary school to detect the existence of chemical and radiological remnants of stored weapons during the Iraqi war [2003] using inspector [1000] that detect harmful radiation as gamma rays ,neutron ,and radon ,it was clear that no radiation was detected above the normally and internationally allowed levels in the field of the study .so it is wise to look for other relevant risk factors that may be related to the causation of the ca.breast.

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الملخص

مرض سرطان الثدي يعتبر من الامراض الشائعة والتي تصيب حوالي 20 % من النساء واحدة من العوامل الخطورة التي ترتبط بالإصابة هو التلوث البيئي بالمواد الكيمياوية والاشعاعية

فكرة الاصابة بالسرطان يكمن خلفها تأثير الاشعاع المتأين والذي يعمل على التحوير الجيني والذي يعمل على تحطيم الحامض النووي واحداث الطفرة الوراثية التي تزيد خطورة الاصابة في كلا الجنسين

عوامل الخطورة تكمن في كون المريض انثى ,وزيادة العمر مع حدوث طفرات في الحامض النووي .

تم اجراء دراسة في(ثانوية الواسطي للنبات) لبيان وجود او عدم وجود المواد الكيمياوية والاشعاعية الناتجة من خزن الاسلحة الامريكية في مخازن المدرسة طوال عام [2003] وذلك باستخدام جهاز 1000 inspector)) لكشف اشعة گاما ,والنيوترون وكذلك الرادون

نتائج الفحوصات اظهرت عدم وجود اي مادة مضرة من المذكورة اعلاه وكانت نسب تلك المواد ضمن النسب المسموحة بها عالميا .لذلك أصبح لزاما البحث عن اسباب اخرى ى لظهور بسرطان الثدي.

1. Introduction

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It is well known that breast cancer represent a common health problem as it has affected (20%-30%) of women in developing countries and it is anticipated because the population in that regions are clearly aging and cancer in general is a disease of elderly.[1]]

The whole world is divided into low-risk and high –risk regions depended on the incidence of the condition; the developed countries being in the high risk category.[1]]

Brody et al, had revised literature on environmental pollutants and found a strong association,between chemicals as PAHs Poly chlorinated biphnols (PCBs) in association to cases of breast cancer. This hypothesis relied on several models explaining risk factors to develop the condition; of these factors were the human and laboratory studies evidences that support the role of the chemical acting either on genotoxic action ,hormonal responsive alteration of the mammary gland and tumor motions related to hormones.[2]]

Ionizing radiation is regarded one of the causes of genotoxic agents that damage DNA & cause mutation and gene alteration which may increase the risk in both gender[3]]

WHO has defined the risk factors as any attribute ,characteristics or exposure of an individual that increase the like hood of developing a disease or injury.

Regarding obesity and fatness ,it is documented that BMI above 25 kg/m2 and central obesity associated with an increased risk of post menopausal breast cancer.[4]]

There has been a strong postulation that sex hormones being endogenous or exogenous had role in the increasing risk of breast cancer , in international pooled analysis illustrated that s in breast cancer risk was about 20% among women using oral contraceptive pills.[5]]

In-depth analysis of risk factors related to breast cancer ,it is likely that alteration in life style and the transition to westernized life style from old traditional onse is one ,of the attributable factors that expose women to higher risk of developing the disease .[6]]

Breast cancer risks [the non-modifiable] are being a women, getting older, and gene mutation effect as 5% to 10% of cancer are believed to be inherited from gene defects as BRCA1 and BRCA2,being the most common genes that are affected by mutation, although other genes had role in the causation as ATM,TP53,CHEK2 and PALM protein . [7]]

It is well documented from several studies that physical inactivity on its own is a risk factor for progression of breast cancer, and in adverse physical activity is regarded as one of the strong protective factors in prevention of breast cancer, the reason may be attributed to the reduction of total body fat, decline in free radical generation and immune system regulation, as most available data considers a strong evidence of the association between physical activity and post-menopausal breast cancer risk.[8]]

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In addition to the previously mentioned risks ,smoking has an obvious effect on the development of cancer in general ,as its effects are caused by aromatic hydrocarbon in the composition of tobacco; according to American cancer society ,cancer prevention study Ⅱ, it was found that a higher incidence of breast cancer in current and former smokers was clear that the newer smoker.[9]]

In Kurdistan, the rate was 168.9/100,000 at age 55-59 and declined to 57.3 at 60years and above,11.1 % had first degree family member with cancer , it was concluded that in Kurdish Iraqi, ca. breast is a condition among premenopausal women ,with multiple pregnancies ,but unfortunately clinical diagnoses was delayed among the studied group.[10]]

In Iraq during the period 2000-2009 years, -23,792 cases were registered among female ≥15 years ,the incidence was incremented from 26.6/100.1000 in 2000 to 31.51/100,000 in 2009 with an increase incidence in age group (40-49) (50-59) and 70 years and above .[11]]

In a preliminary study carried on the crude incidence of breast cancer, 22/100,000 female populations. The highest frequency was among age group [45-99] years. Among the previously mentioned study ,24.6 % of the patienst, were illiterates 70.8% had medical consultation age and 35 % were diagnosed in the age of 45-54 years, 86.3 % were married .7% had first child over age 35 years , 8.5% were nulliparous, 46% had history of lactation.20.5 % had history of hormonal therapy,35.3% had family history and 18.5 % had relative with breast cancer.[12]]

In a study done in Iraq by Dr .nada Alwan , who studied ca .breast in relation to socio demographic and clinical pathogenic characteristic ,it was revealed that out of 5044 female attended the main referral training center for early detection of breast tumors in Baghdad,721[14.3%] were proved to have breast cancer[54.2%] were in their premenopausal age ,as [31.90] were among age group [40-49]years and [22.2 %]were young under 40years.[12]

2.Methodology

Regarding the proof or disproof the existence of the harmful radiological rays in selected area of the study a strong co-operation was performed by the ministry of higher education and scientific research ;the science college in Kirkuk, to start exploring and searching for the existence of radiation source in the school Building and nearby region.

a scientific committee of three assistant profs were invited to participate in the study or using a novel real time Instrument inspector 1000 a mirion technologies Product [CANBERRA]

for application of neutron probe it is advisable to use in areas suspected to have high degree of radiation by directly detecting the gamma and neutron signals with additional alarm and warning thresholds.

The instrument mentioned above is un like that traditional han d held instruments with primitive ROI and analysis it applies full mathematical peak search and fit capability and

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improve the confidence of nuclide identification increasing sensitivity add reducing false positive results. digital hand help but multi-channel Analyser is simple real time isotype used to identification and classification with fully stabilized.

Nai (sodium iodine) probe (optional) contains gamma locator mode for determination of location of sources for radiation with audible warning and alarm Limit for gamma dose rate with high performance spectroscopy reduced to one bottom simplicity with high-resolution colour LCd that is clearly visible for bright sunlight to night conditions. /refer

Five suspected region, were chosen and Field of suspected radiation where American weapons were stored , in during the year 2003, that suspected areas where explored and examined In-depth to confirm or exclude the existence of Radiation but fortunately radiation was not detected in any region.

to complete the research and to prove the hypothesis ,5 soil and wall construction samplesl were taken for laboratory testing of chemical and radiological analysis of heavy metal , radiation and other environmental pollutants to exclude their appearance.

3.Results and Calculations

Table -1- shows the number of affected female in relation to occupation.

The total number affected by the tumor was 14 ; 10 were teachers and 4 were students,. Among 10 teachers 5 were dead, while among the students 2 were dead, and the rest are still alive on treatment.

Table -1-The number of affected female and the death status ;

No and type of affected	No .	Dead	Alive	Total
1]-Teacher	10	5	5	10
2]-students	4	2	2	4
Total	14	7	7	14

Table -2- illustrates the distribution of type of tumors according to affect members among teacher 60% [6 out of 10] had breast cancer ,30% [3 genital] and 10 % [1] had lung cancer .

Regarding students [2 out of 4] 50 % had blood malignancy and 2 had benign solid tumor in the breast .

Table -2- Distribution of type of tumors according to the affected member.

Affected member	Type of tumors		
	Malignant	Benign	Total

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	Breast	Genital	Lung	Blood		
Teachers	6	3	1	0	0	10
Students	0	0	0	2	2	4
Total	6	3	1	2	2	14

The result of the radiological analysis using inspector ^{TM} 1000 multi channel analyzer showed that the level of gamma rays was within the internationally allowed rates i,e . less than 0.057.mrem/hr and the neutron count rate was zero in the 6 suspected sites according to table -3-.

Table -3- Levels of gamma and neutron rate in the suspected polluted region.

No	The sites	Gamma dose rate mrem/hr	Neutron count rate Neutron / sec
1	head master dep.	0.0039	0
2	inner ground play	0.0037	0
3	outer ground play	0.0035	0
4	Studying room I	0.0038	0
5	Studying room Ⅱ	0.0037	0
6	outer ground play	0.0033	0

The results of soil sample testing in the relation to radon level in the three suspected region showed vary small level of radon ,less than the internationally allowed rate ,which was regarded as normal level and environmentally harmless with no any serious effect on human health ,as illustrate in the table -4-

Table -4- The rate of the radon exposure .

Sites	[Mean radon exposure [Bq /m^3
Behind store	25
Inner play ground	50
Outer play ground	45

As the internationally allowed level is up to 100 Bq /m^3.

4.Conclusion

The exact cause or the intended effect of radiation or chemical was excluded by the two aspect of tests [chemical and radiological],so the causes of carcinoma of breast in the school could not be related directly to the weapons existed at the mentioned area.

In the future all cases with confirmed , breast cancer need to be in depth investigated to show the association of cancer with other socio economic and lifestyle factors.

5.Limitation of study

1]-the study was done lately as many patients were died during the period of the research.

2]- during summer time ,school had holiday and it was difficult to contact the affected patients to complete the study.

6.Recommendations

1-It is recommended to pay more attention to different risk factosr related to development of cancer

2- Activation of PEN program in PHCCs for early detection of malignancies in general and ca .breast specifically.

3- health promotion for Breast Self –Examinations of all women from age 20 years as affordable screening program.

7.Discussion

Kirkuk is an important province of Iraq regarding the industrial activities and oil companies and their burden an environment and pollution.

According to national statistics the number of breast cancer, in 2014 was 244 i,e.23.85 % of total cancer cases , but the registered was 16.17%,in regarding to total population of Kirkuk being 1508854 persons.[17]

Ca. breast is one of the multifactorial health problem ;many risk factor has been linked to the conditions genetic being on one extreme the environmental on the other extreme.

Although scientists has determined different factors that contribute to causation of breast cancer , but most experts believe that the disease as mentioned before has combined genetic, environmental and [hormonal factors. [18]

The appearance of more than 13 cases in same setting (Al-Wasity secondary school) raises the possibility of pollution previously encountered their .

The environmental assessment began by civil defense office in the Kirkuk by the invitation of Kirkuk ,directory of health as the (CBRN) group has thoroughly investigated the area for chemical remnants [of the weapons preserved in the school on as a storage site .[19

The investigation showed nothing relevant to any abnormal biological or chemical substance in the test area . the second step started through the university group of Kirkuk, college of sciences by a scientific committee that consist of three assistant professor in the field of radiation .

The result of the investigation declared that the level of radiation was within level of normal allowed international level.

The site of suspected area in the study was examined using the modern investigator [inspector 1000],that detect the abnormal and harmful radiation ,the result showed no any abnormal ,risky radiation in the selected region of the school ,and the rates were within internationally allowed levels.

In Sulaimaniya province a study done during years 2006 – 2012, that showed increase incidence of breast cancer among women ≥ 60 years ,but not in younger age.

[In the current study most of our patients with breast cancer were aged 45 years and above.[20

Regarding the hypothesis of the current study that supposed the association between breast cancer and radiation exposure the a Anex 1 of the recent UNSCEAR expert report on effects of radiation concluded that certain groups of patients are prone to develop cancer if exposed to radiation which includes the first group of patienst with tuberculosis who exposed to serial x rays ,patients who received radiotherapy for benign disorders, childhood cancer survivors ,and women treated for post [partum mastitis.[21]

In 2016 the crude incidence rate of cancer among female was 26.26% among total cancer cases while in Kirkuk the registered breast cancer cases was 56.01% (219) among all cancer cases (391),being number one among top ten cancer in female.

While in 2015 the total number of breast cancer was 200 , and in 2016 it was 219 cases ;meaning that the incidence rate is almost fixed with no Sharp escalating pattern. [22]

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LAPAROSCOPY AS A DIAGNOSTIC TOOL IN ABDOMINAL PROBLEMS

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ABSTRACT

Laparoscopy has been used for decades now in the treatment of various abdominal pathologies in general surgery, urology, gynecology and pediatric surgery. The use of laparoscopy in establishing the diagnosis when other modalities have failed is also well known. The aim of this study was to assess the uses of laparoscopy as a diagnostic tool in various abdominal problems in Mosul City hospitals and its benefits in achieving the accurate diagnosis. Between the year 2009 and 2019, Laparoscopy was used as a diagnostic tool in Mosul City hospitals for 200 patients with various abdominal problems The patients were classified into five categories including abdominal trauma, acute and chronic abdominal and pelvic pain, cirrhosis and hepatitis, malignancies and intra-abdominal testes.

Keywords, Laparoscopy, diagnostic laparoscopy (DL), trauma, pain
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1. Introduction

The most important step in treating any patient is to reach the accurate diagnosis. To do so, many investigations are utilized according to the patient's scenario. Noninvasive modalities like laboratory investigations and imaging should always be used in the first steps and usually they are sufficient enough to reach the diagnosis. Nevertheless, there are certain patients in who despite using all the above mentioned investigations, the diagnosis remain obscure and the next step remains cloudy. Diagnostic laparoscopy may help in providing the accurate diagnosis, avoiding unnecessary laparotomy, and help in planning the optimal therapy in these selected patients.

DL has been used for decades now in the diagnosis of abdominal trauma [1-3]. The main indication for (DL) in abdominal trauma is suspected but unproven intra-abdominal

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injury after blunt or penetrating trauma, whilst the main contraindications are: hemodynamic instability(systolic blood pressure <90 mm Hg), known or obvious intra-abdominal injury, posterior penetrating trauma with high likelihood of bowel injury and limited laparoscopic expertise [4,5] . The most important thing to mention is that diagnostic laparoscopy should only be done in stable patients and in the presence of a well-equipped theatre and an expert laparoscopic personnel.

Despite the daily improvements in laboratory and imaging facilities, acute abdominal condition remain a diagnostic challenge for the surgeon with a significant rate of negative laparotomies which carried a burden on the patient and on the health resources.[6-8]

In many cases of chronic abdominal and pelvic pain, despite the use of various laboratory and imaging investigations, the diagnosis remains cloudy. Surgeons are consulted when the pathology is unclear or tissue diagnosis is required, in these cases, DL can be the savior. Being chronic in nature, these conditions have a great effect on the patient's quality of life, performance and psychological condition.

Clinically, small, metastatic foci in the peritoneum or liver cannot be accurately diagnosed using the traditional ultrasound, CT or MRI, in some cases[9]. DL should be considered when percutaneous biopsy is either not possible or inadequate to make therapeutic decisions and to diagnose the primary tumor. Non-invasive imaging may misjudge the stage of lymphoma, while laparoscopy can correctly identify the stages of abdominal lymphoma.[10]

The accurate diagnosis of hepatic diseases is crucial in the treatment and follow up. The type of hepatitis for example determines the type of the treatment. Also in cases of liver cirrhosis, the diagnosis and staging is so important in both the treatment and the prognosis, that's why liver biopsy is the key in these patients' work up. DL can be so accurate in the diagnosis and staging by both directly seeing the gross appearance of the liver and by taking multiple biopsies with a relatively high sensitivity. [11]

Laparoscopy has proved to be the best available procedure for diagnosis and management of impalpable undescended testes. [12,13] it also has the advantage of therapeutic intervention in term of orchidopexy or orchidectomy.

2.Materials and Methods

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Between June 2009 and June 2019, diagnostic laparoscopy was performed in Mosul city hospitals(Al-Jamhoori Teaching Hospital, Ninawa and Al-Zahrawy Private Hospitals) for 200 patients with various abdominal conditions. Of the patients, 113 were males (56.5%) and 87 were females (43.5%. (

Diagnostic laparoscopy was done electively under general anesthesia in 176 patients (88%) and under local anaesthesia in the rest of the patients(12%) . The 1st port was infra-umbilical in all cases and other ports were added accordingly. A nasogastric tube was inserted during the procedure if the stomach was distended. The whole peritoneal cavity, including the pelvis, was thoroughly examined routinely. Multiple biopsies were obtained from the suspected pathology

The patients were classified into five categories including:

-Abdominal trauma (60 patients)

-Acute and chronic abdominal or pelvic pain (88 patients)

-Oncological indications (32 patients)

-Liver cirrhosis and hepatitis (12 patients)

-Intra-abdominal ectopic testes (8 patients)

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3.Results and Calculations

Abdominal trauma

From October 2009- October 2013, 60 hemodynamically stable patients with abdominal trauma (48 blunt and 12 penetrating injuries) (Figure 1) underwent DL in the operating theatre of the Emergency Department of Al-Jamhoori Teaching Hospital in Mosul. The mean age of the patients was 25.57 years ranging from 2 to 56 years, 51 males and 9 females.

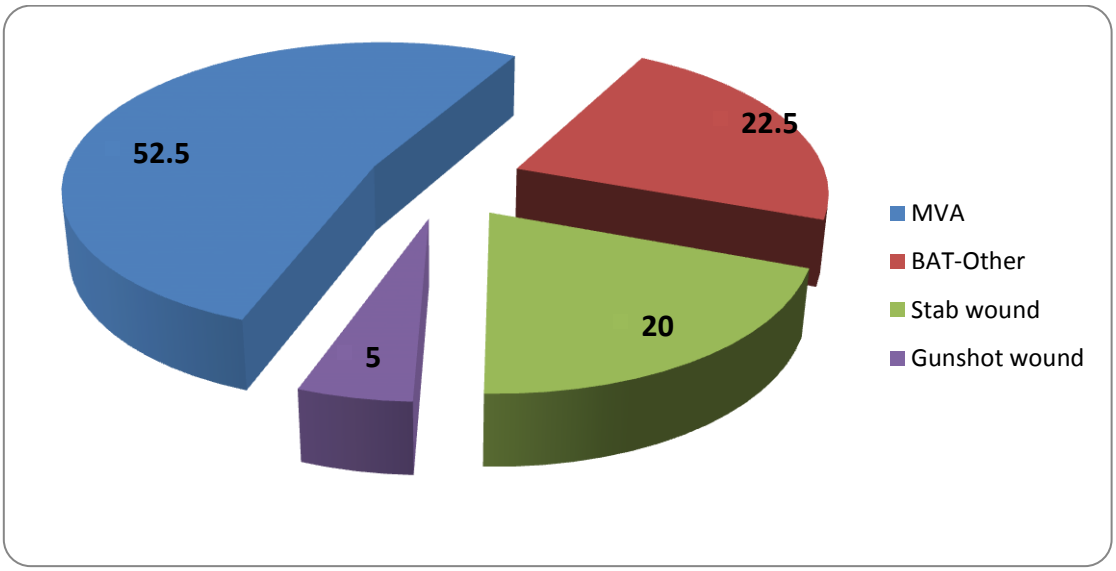

Figure 1: Mode of injury

Criteria for inclusion in the study were: suspected but unproven intra-abdominal injury in patients who were upon arrival, or after initial resuscitation, hemodynamically stable.

Our study demonstrated that unnecessary laparotomy was avoided in 63.3% of the patients. Out of 23 patients with positive (DL), therapeutic laparoscopy was performed in 4 patients (17.4%), including hemostasis of liver, mesentery and omentum (table 1). In 18 patients (78.2%) conversion was necessary because of inadequate examination, injuries that cannot be repaired by laparoscopy, surgeon's lack of experience and clinical instability. All the patients were discharged without morbidity and mortality, and none of the patients reported for complications.

Table 1 : management of 23 patients with positive DL

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Intervention after positive DL	No. of patients	Percentage
Therapeutic Laparotomy	18	78
Laparoscopic Intervention	4	17.4
None	1	4.4

Acute and chronic abdominal and pelvic pain

In the same 10 years period, DL was performed for 88 patients with undiagnosed abdominal or pelvic pain. Fifty -seven patients were females and 31 were males.

In 46 of the cases, the presentation was acute; DL was performed to achieve the accurate diagnosis when other modalities like ultrasonography and CT scan failed. Findings are shown in table 2.

Table 2

Findings	Perforated viscus	Gynecological problems	Mesenteric ischemia	Others	Negative DL
No. of patients	13	16	3	5	9
Laparoscope-pic intervention	2	7	None	2	None

In 5 of the cases, the diagnosis was perforated viscus by other investigations, for example abdominal plain X-ray showing free air under the diaphragm, we performed the DL to select the accurate approach and incision. (Figure 2)

A B

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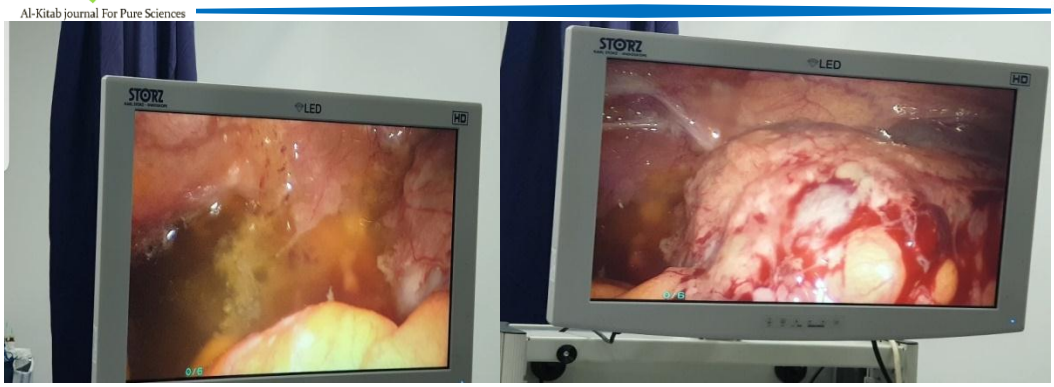

Figure2 : DL performed to select the appropriate incision in perforated DU (A) and perforated appendix(B)

Intervention was done laparoscopically in 11 cases including biopsies, ovarian suturing, and removal of ectopic pregnancies and aspiration of cysts.

In 42 of the patients, the pain was chronic, of these, gynecological problems was diagnosed in 28 patients (Table 3) . They were females with chronic abdominal and pelvic pain not responding to treatment, endometriosis was the most common pathology found.

Tb peritonitis was found in 7 of the cases, Ascitic fluid and multiple biopsies were taken for AFB staining. Figure (3)

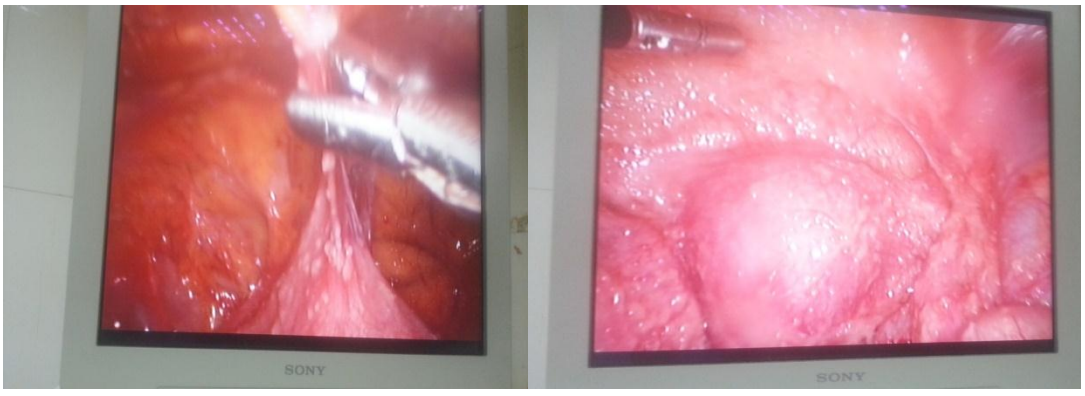

Figure 3 : DL in chronic abdominal pain demonstrated TB peritonitis

In 3 of the cases with chronic undiagnosed abdominal pain, an internal herniation of small bowel was diagnosed. Repair done laparoscopically in 2 patients and immediate laparotomy was performed in the 3rd case because of dense adhesions.

Table 3: findings in patients with chronic abdominal and pelvic pain

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Findings	GYNECOLOGICAL	TB	INTERNAL HERNIA	OTHERS
No. of patients	28	7	3	4
Laparosco-pic intervention	8	-	2	2

Oncological indications

Thirty-two patients were referred to us for DL by the oncology doctors with unknown primary malignancy. Seventeen males and 15 males. Metastatic work up did not achieve the diagnosis including CT, MRI and tumor markers.

Ascitic fluid was found in 22 patients, sampled and was sent for cytology (table 4). Liver, omental, peritoneal and mesenteric masses were biopsied (Figure 4) and the final diagnosis was reached in 28 patients (90%).

Table4 : Findings of DL in oncological cases

Findings	Ascites	Secondary spots	Liver hemangioma	Negative DL
No. of patients	22	23	5	3
Laparoscopic intervention	22	28	-	-

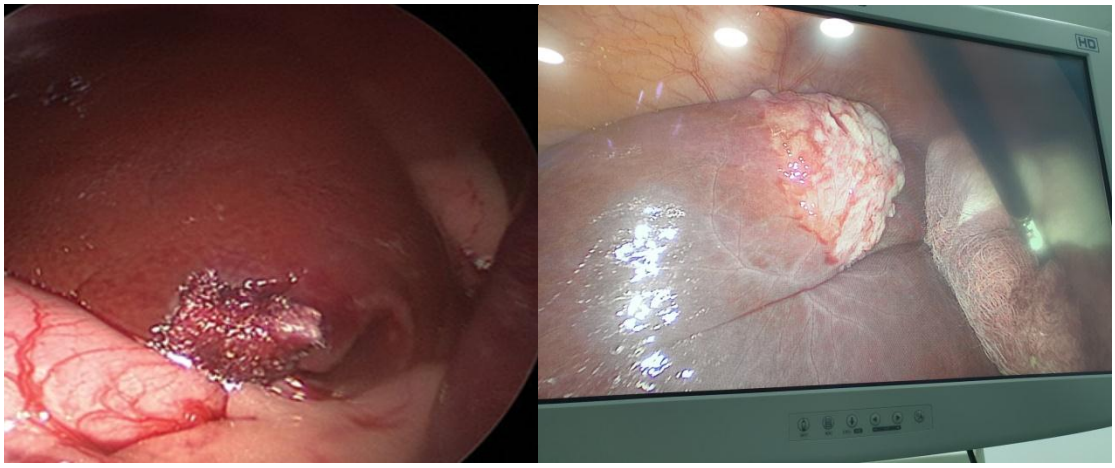

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Figure 4: Liver biopsy done laparoscopically

In 5 cases supposed to have liver metastases, DL revealed hemangiomas in the liver rather than metastases. (Figure 5).

In 3 patients (10%) the DL was negative and did not add to the workup.

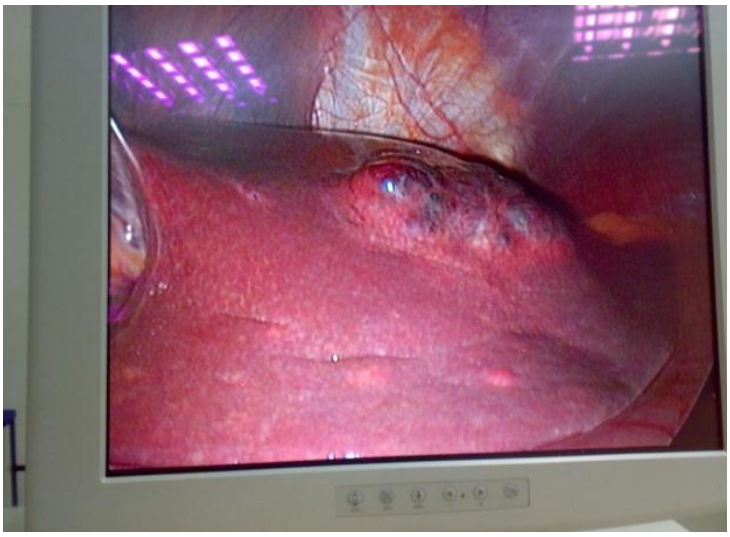

Figure 5: hemangioma found during DL

Liver cirrhosis and hepatitis

Twelve patients were referred to us from the gastroenterologists with the diagnoses of cirrhosis in 7 patients and hepatitis in 5 patients. Six males and 6 females. Multiple biopsies were taken from the liver and sent for histopathology. (Figure 6)

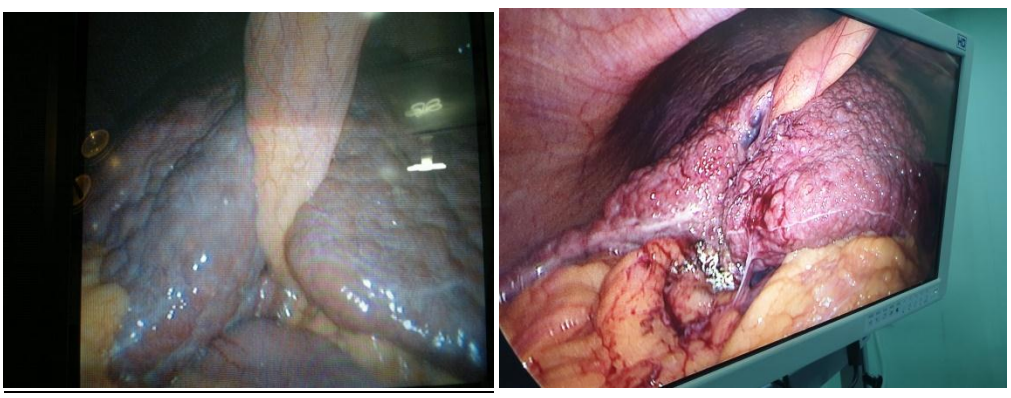

Figure 6: cirrhotic liver biopsy

Intra-abdominal ectopic testes

8 adult patients were referred to us with the diagnosis of undescended testes. The mean age was 26.7 years. MRI determined the position in 5 cases, in the three others it was found during laparoscopy. Re-positioning done in 6 cases, and orchidectomy done in 2 cases (Figure 7) .

A B

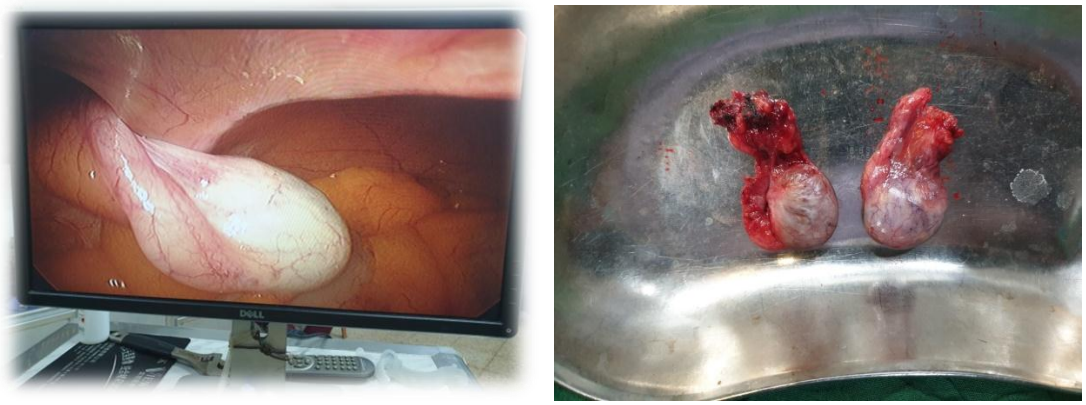

Figure 7:Intra-abdominal testes found during DL (A) and orchidectomy done (B) Conclusion

4.Conclusion

Laparoscopy is a safe, simple and effective diagnostic tool that can be performed in most centers by expert laparoscopic surgeons in various abdominal problems and can aid in achieving the diagnosis when other modalities have failed.

5.Discussion

Taking in consideration the difficult situations in our country in general and especially in our city over the last few years, our patients did not have free access to other diagnostic modalities like imaging devices , especially CT scan and magnetic resonance imaging (MRI) . Thus, DL can be a suitable option in many cases.

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Diagnostic laparoscopy is very important for making a definitive clinical diagnosis whenever there is a diagnostic dilemma. Laparoscopy reveals either no abnormality or discovers a disease requiring no surgery for proper management, thus avoiding an unnecessary burden of non-therapeutic laparotomies.[14-16[

We used DL in selected 60 patients with abdominal trauma. Criteria for inclusion in the study were: suspected but unproven intra- abdominal injury in patients who were upon arrival, or after initial resuscitation, hemodynamically stable. They presented normal Glasgow coma scale and limited associated injuries, and surgical team and technical conditions were adequate. All had investigations (like FAST examination or CT scan) with equivocal results. Criteria for excluding patients from the study were: hemodynamic instability despite resuscitation, known or obvious intra-abdominal injury, and posterior penetrating trauma with high likelihood of bowel and retro peritoneal injuries. The most important advantages are the reduction of the negative and non-therapeutic laparotomy rate and shortening of hospitalization.

DL can play a very important role in diagnosing vague cases of acute abdominal and pelvic pain. In our study, we selected 46 patients with acute abdomen in the ER in whom neither physical findings, nor the investigations like US and CT scan could reveal the diagnosis clearly. In the presence of our laparoscopy unit, we found that DL can be very useful in reaching the diagnosis with certainty. Gynecological causes were the most common findings in all the patients (35%), and perforated viscus was the most common finding in male patients (28%), to be mentioned, DL can aid in selecting the approach of surgery or the type of wound in query cases. In 9 cases, the DL was negative, this can be considered a gain for the patients in term of avoiding negative and non-therapeutic operations, Talaat et al[17] for example, found that without laparoscopy, the overall rate of unnecessary appendectomy is high (women 39%; men 15% .(

Cases of chronic abdominal or pelvic pain represent a diagnostic challenge for physicians and surgeons. DL can , in selected cases, solve the problem for these patients. Among 42 patients in our series , the diagnosis was made in more than 90%, with gynecological problems being the most common finding (67%). These young females had a long history of pelvic pain, with a lot of investigations, consultations and medications with no response. Endometriosis and pelvic inflammatory disease was proved with certainty by the

DL. Abdominal tuberculosis sometimes cannot be differentiated from malignancy clinically. Laboratory and radiological investigations can only suggest, but not confirm, the diagnosis[18] . We diagnosed TB peritonitis in 7 cases in whom all TB work up failed to diagnose the condition and were referred to receive the appropriate treatment. Udwadia[19] suggests that the common findings in abdominal tuberculosis are peritoneal or visceral tubercles, varying in size from 2 mm to 1 cm. Small bowel adhesions and strictures can also be seen.

The role of DL in oncological cases is very well established. In our series, the diagnosis of the primary tumor was made in 90% of the cases by directly visualizing the tumor or by biopsies taken from the secondary deposits in the liver, peritoneum, omentum or other organs. In 5 cases referred to us with suspected liver metastases, the diagnoses of hemangiomas were clearly made that were missed by the pre-operative imaging. We had three patients of lymphoma suspected preoperatively by CT scan which were technically difficult for image-guided biopsies preoperatively. We performed DL and took multiple biopsies from mesenteric lymph nodes and from retroperitoneum that proved the diagnosis. Herrera et al. [20], also reported the detection rate of liver lesions and a diagnostic yield up to 95% with laparoscopy.

In the presence of ultrasound, CT- or MRI-scan guided percutaneous liver biopsy , most of suspicious liver lesions can be assessed. Nevertheless, there are cases that were referred to us from the gastroenterologist for assessment . We noticed that DL can play an important role in early diagnosis of cirrhosis. Perdita et al [21] mentioned that all imaging procedures do not allow a direct viewing of the liver. The direct visual inspection of the liver and the abdomen is the privilege of laparoscopy.

It is very well agreed that Laparoscopy is the best way to diagnose impalpable undescended testes. In pediatric surgery it is used routinely for this purpose. We had 8 adult cases with delayed diagnosis of undescended testes. Preoperative localization is usually possible by MRI, but sometimes, as in 3 of our cases, it was only done during DL. The rule is to perform orchiopexy laparoscopically, but in cases of very small atrophied testes, or in the presence of suspicion of malignancy, orchidectomy is the preferred approach. In 2 of our cases orchidectomy was done because of abnormal gross appearance in one case and for the patient's wish in the second one

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Vitamin D levels and its association with uterine fibroid development

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ABSTRACT

1-Setting: The study was carried on at Kirkuk governorate hospitals, department of gynecology and obs Background: Uterine fibroid are benign tumors of women uterus, affect female in reproductive age group.

Objective: To detect vitamin D deficient female and frequency of uterine fibroid.

Patients and Methods:

tetrics.

2-Methods: The study conducted on women with uterine fibroid, their age was ranging from 21-50 years. Vitamin D in serum was estimated using fluorescence immunoassay method.

Results:

It was found that vitamin D levels differ significantly between different age groups while there was no significant in relation to parity. Patients with bleeding had lowest vitamin level (11.74±4.92) while asymptomatic patients had highest value of vitamin D(17.16 4±10.79). Educated women had lower vitamin level than uneducated ones.

Conclusion: Symptomatic patients and educated women had lower Vitamin D level than asymptomatic and uneducated ones

.**Keywords:** : Uterine fibroid, women, vitamin D, Kirkuk

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1. Introduction

Uterine fibroid is defined as a pseudo capsule of muscle fibers that surround localized proliferation of smooth muscle cells; and its mainstay treatment is surgery. According to recent statistics, this condition is regarded as one of the most common benign tumor affecting female reproductive system, and its effect in addition to economic obstacles can have burden on common health care system (1).

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In a study done by Blauer et al., it was confirmed that there was effect of vitamin D3 on the inhibition of human fibroid cell growth and myometrim (2).

The first group who studied the possible association between vitamin D and uterine fibroid was Al-Hendy group who reported an increase susceptibility to fibroid among black and white women in North Africa (3).Recently the relation between vitamin D and calcium demonstrated that the main regulator of calcium homeostasis is vitamin D; and it was concluded that vitamin D3 is a potent anti tumor agent that accelerates the shrinkage of uterine fibroid in vitro, however human trial yet not conducted completely and conclusively (4). Fibroid (leiomyomas) affects more than 25% of females in reproductive age group with a considerable effect on morbidity; the main cause of which is that most fibroids are asymptomatic and found accidentally during routine visits or the female experience bleeding, pressure symptoms or urinary problems (5). It is demonstrated that vitamin D among black female who have lower level of vitamin is a principal risk of developing uterine fibroid; also it was clarified that uterine fibroid has lower level of vitamin D receptor (VDR) comparing with adjacent myomatrial tissue (6). The rationale of our study is to demonstrate that fibroid is a common health problem among reproductive age group female with its significant burden on health, economy and morbidity regarding its unfavorable outcome following hysterectomies in young age group, in addition to the lack of screening of asymptomatic cases by regular official health programs; in relation to Iraqi Health System.The objective of the current study is to detect the deficient female with vitamin D levels and the frequency of uterine fibroid among that group.

2.Patients and Methods

1-Setting: This study was conducted in Kirkuk hospitals, gynecological and obstetric department, on the selected sample for the period from March 2018 to March 2019

2-Sample size: A total of 94 women on reproductive age were enrolled in the study. They were ranging from 21 to 50 years and they were selected by simple random sampling to avoid selection bias. Regarding the questionnaire list which included the following information in regard to study samples {age, parity, clinical symptoms and educational levels}. It was performed by single interviewer to avoid information bias.

3-Methods: All included patients were referred to laboratory examination to test for the level of vitamin D in the serum of patients and an abdominal and pelvic ultrasound was performed to confirm the diagnosis of uterine fibroid.

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Estimation of vitamin D in blood serum was carried on according to procedure of ichroma TM, which is a fluorescence immunoassay (FIA) for quantitative determination of total 25(OH)D2/D3 level (Boditech Med incorporated , Republic of Korea).

4-Statistical Analysis: Statistical analysis was carried out using statistically available SOFTWARE(SPSS version 18).Comparison between patient and control groups were made using Analysis of Variance (ANOVA) analysis and Duncan test to show significant difference between groups and between each two groups. (4)

3.Results and Calculations

Table 1, shows the serum vitamin D level according to age. The value of vitamin D was highest among 31-35 years followed by 21-25, 46-50 and the lowest value was among 36-40 years. Statistically there was significant difference between age groups (P<0.05).

Table 1 Serum vitamin D level in fibroid women according to age group.

Serum Vitamin D (ng/ml)

Age group	Vitamin D Mean value±S.D.
21-25	18±10.95 a
26-30	13.77±6.08 ab
31-35	19.6±12.30 a
36-40	8.42.±1.43 b
41-45	13.31±8.43 ab
46-50	17.78±7.33 a

Table 2 shows that the vitamin D level among niliparous and primiparous was lower than multiparous. Statistically there was no significant difference between different parity (P=0.779).

Table 2. Serum vitamin D level in fibroid women according to parity.

Serum Vitamin D (ng/ml)

Parity	Vitamin D Mean value±S.D.
Nulipara	15.25±8.66
Primipara	15.52±9.87
Multipara	17.16±10.79

Table 3, shows serum vitamin level among women without clinical symptoms was highest followed by those with pressure and the lowest was among those with bleeding. Statistically there were significant difference between three groups of women (P<0.02)

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Table 3 .Serum vitamin D level in fibroid women according to clinical symptoms.

Serum Vitamin D (ng/ml)

Clinical symptoms	Vitamin D Mean value±S.D.
Asymptomatic	17.16±10.79
Bleeding	11.74±4.92
Pressure symptoms	13.00±4.31

Table 4, shows the vitamin D value among educated women were lower than uneducated ones.

Table 4 .Serum vitamin D level in fibroid women according to educational status.

Serum Vitamin D (ng/ml)

Education	Vitamin D Mean value±S.D.
Educated	11.84±4.754
Uneducated	15.61±9.53

4.Discussion

The level of serum vitamin D varies in different countries; it is different according to sociodemographic, dietary habits of society in addition to anthropometric factors and educational level. In our country no previous studies were carried out especially in Kirkuk governorate, therefore this preliminary study was decided to show the levels of vitamin among studied women with uterine .fibroid

About 25% of myomas are detected and diagnosed among women older than 40 years, that is to say, it is one of the most frequent perimenapausal conditions which alter menopause its occurrence will .(suddenly decline(7,8

In the current study no cases of recurrent myomas were detected, in contrast to a study done by Wise and Langhhlin who showed a high frequency of recurrence following myomectomy which may .(indicated the existence of tumor specific chromosomal abnormalities in 40% of tested samples (9

In this study the majority of fibroid women were asymptomatic, followed by pressure and bleeding. Identical to report of Brakta et al. (5) that most of females with uterine leiomyoma are without clinical symptoms. The lowest value of vitamin among women with bleeding is expected as patient with .hemorrhage will loss blood which effect serum vitamin level

It is a well known fact that myomas are more common in nilliparous women, which's cause may be thought to be increased exposure to regular or continuous menstrual cycles without interruption by pregnancy or lactation (10). In this study although vitamin D was low in niliparous and primiparous than multiparous, but statistically there was no significant difference in vitamin value among women .with different parity

Regarding hypovitaminosis, it is recently postulated to be an important risk factor in the myoma formation; as Baired et al. (11) concluded in his research that women with sufficient Vitamin D gat reduced risk of myoma in comparison with women with vitamin D deficient women (1). The level of Vitamin in our studied groups is low, this finding is accordance to study in Turkey (12) who carried on a cross sectional study to show relationship between serum vitamin D levels and of uterine fibroid in premenopausal women, with uterine leiomyoma, they found that vitamin levels were significantly .(lower than healthy control women and 78% of patients had severe vitamin deficiency (<10 ng/ml

In a study by Garg et al, (13) detected that 89.92% of women with Vitamin D deficiency were illiterate while 43. 92% literate ladies were deficient to Vitamin D. Regarding the employment, 70% of deficient women were housewife in contrast to 40.05% among working women (13). In a study performed In Copenhagen (14) on 700 subjects, 238 had vitamin D insuffiency, 135 had vitamin deficiency of which 13 had severe deficiency (<12.5 nmol/L). They reported that the relative risk was significantly lower for whom studying for a Bachelor degree level had the lowest RR=0.40 compared to master degree for vitamin deficiency and study period. The lower vitamin D level among educated than uneducated women in the present study, is in accordance to other studies. Shinkova et al., (15) found Vitamin D level were higher in the males with elementary and secondary education compared with higher education.

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The Role of Helicobacter Pylori in The Causation of Laryngopharyngeal Disorder in Specialized Allergic Center /Kirkuk-Iraq

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ABSTRACT

Laryngopharyngeal reflux disease is a common manifestation of GERD, about 10% of cases presented to ENT department. Out of 56 cases tested for H.pylori ,36 were positive for serum test and 20 cases were positive for both serum and stool.75% of cases responded to treatment of GERD with no recurrence

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الملخص

مرض استرجاع الحنجرويلعومي يعتبر من الاعراض الشائعة والمصاحبة لمرض استرجاع المريء حيث ان 10% من الحالات يتم مراجعتهم لاختصاص الانف والاذن والحجرة .من مجموع 56 حالة تم فحصهم واشراكهم في الدراسة ,اظهرت نتائج الفحوصات ان 36 من المصابين كانت نتيجة فحص المصل لديهم موجبة بينما اظهرت نتائج الفحوصات 20حالة من المرضى كانت لديهم فحوصات الخروج والمصل موجبة للبكتريا الحلزونية

1. Introduction

Laryngopharyngeal reflux (LPR) is one of the common manifestation of GERD (Gastroeosophageal Reflux Disease),although it is an extraesophageal system ,but up to 10% of cases present to ENT specialist and diagnosed their. [1]]

The presumptive pathophysiology for the direct mechanism for(LPR)is the retrograde reflux of gastric content (Acid and pepsin) into the laryngopharynx causing inflammation and irritation for the

sensitive mediated irritation for the esophagus leading to reflux and causing the occurrence of symptoms.[2]

In a systemic review and meta – analysis on the rate of H.pylori in laryngophangeal reflux, it was shown that the overall prevalence rate of H.pylori infection was 43.9 %,that was determined by of 13 publications [3

An interesting feature of this condition is that fewer episodes of reflux are needed to injury laryngeal mucosa than that compared to mucosa of the esophagus.[4]]

The pattern of LPR is different than gastroeosophageal reflux it occurs usually at daytime in up right position in contrast gastroesophageal reflux that occurs at night time during lying down.

H.pylori may be found in many sites in upper respiratory tract including laryngeal mucosa and intrarefinoid region ,as the mechanism indicates that when gastric contents pass the upper esophageal sphincter ,it causes hoarseness of voice ,Globus ,cough, massive throat mucous.[5]

The identification of H.pylori was first proved by marshal and warren ,it was named campylobacter like organism.

The organism is a spiral shaped gram negative bacteria with four to six flagella ;it has the characteristic of obligate microaerophoilic properties and exert urease ,catalase and oxidase positive and it has the ability to protect it self by motility and the ability to convert urea to ammonium by urease and the formation of miliea around itself.[6]

Objective:

The specific objective of the current study is to investigate the potential role of H.pylori as a cause of laryngopharyngeal disorder.

2.Methodology

(1).setting and duration :-

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The study was carried on in the specialized center for allergic diseases, Kirkuk, for the period from the first of January 2018 to the end of 31th December 2018.

(2). Study design :- an analytical cross-sectional study design was performed for the current study.

(3). Sample prosperities :-

A convenient sample of all attendants to the center referred for refractory laryngopharyngeal condition.

The study variables were age , gender ,with the clinical diagnosis of laryngitis ,following referral from the primary health care center and secondary health services [hospital],specialized government clinics and private clinics in Kirkuk.

The total sample size was 56 patients ,fully investigated by otologists prior to referral as refractory allergic cases.

Their age range was from 15-60≥ years with an interval of 15 years between each group.

Equipment and procedure.

Detection of H.pylori I serum was carried on using a sandwich latent flow chromatographic immunoassay for the quantitative detection of IgG,IgM and IgA antibodies using CTK biotech ,inc .san diego ,USA.

While that of the stool was carried out to detect H.pylori Ag using the onsite H.pylori Ag rapid test CTK biotech ,inc ,san diego ,USA.

3.Results and Calculations

Out of 56 referred cases from all health sector as refractory allergic condition for further evaluation and expect diagnosis with hyper responsive symptoms ,20 cases were proved to be positive by both methods [stool and serum]tests ;while 36 were positive by serum test , with a male to female ratio 1: 1 as demonstrated.in table-1-

Table -1- shows H.pylori test result In serum according to age .

age group	Test result		Total
	+ve	-ve	
16-30	10	15	25
31-45	6	12	18

46-60	4	7	11
60≥	0	2	2
Total	20	36	56

Table -2- shows the percentage of positive cases according to age group as the highest number was among age group 15-30years ,and the lowest among age group 60≥.

Table -2* shows the distribution of cases according to gender .

age	male		female		total
	+ve	-ve	+ve	-ve	
15-30	3	4	7	11	25
31-45	0	3	6	9	18
46-60	1	5	3	2	11
60 ≥	0	0	1	1	2
Total	4	12	17	23	56

Table -3- shows the results of H.pylori Ag in stool, which was higher among female [5] than male [3] with the predominant age group 15-30 years.

Table -3- illustrates the percentage of H.pylori Ag in stool among studied sample .

H.pylori result Ag					
age group	+ve		-ve		Total
	M	F	M	F	
15-30	1	5	3	2	11
31-45	1	0	2	2	5
56-60	1	0	2	1	4
60≥	0	0	0	0	0
Total	3	5	7	5	20

While table -4- shows the response to treatment with anti H.pylori ,therapy following stool test and clinical improvement.as 75% of the cases had full response to treatment with disappearance of their symptoms.

Table -4- shows the response to treatment with anti h.pylori therapy.

Age group	Response to treatment				
	total	M	F	+ve	%

				response	
15-30	10	3	7	7	70%
36-45	6	0	6	5	85%
46-60	4	1	3	3	75%
60≥	0	0	0	0	0%
total	20	4	16	15	75%

4.Conclusion

From the current study its concluded that cases with chronic laryngeopharyngitis need to be tested for H.pylori.

5.Discussion

Infection by H.pylori is a common world wide problem .It counts for 30-40% in development countries and 80-90 % in developing ones.

Many studies suggest that h.pylori in the gastric fluid enters the nasopharyngeal reflux disease (GERD)and it my colonize the dental plaque ,adenoid tissue and tonsils ,from their it may ascend to middle ear and Para nasal sinuses either directly or by reflux from these locations triggering various pathological problems in the ear ,nose and throat.[7]

It is well known that H. pylori is the sole gastric bacteria for the time being ,while its DNA has been detected in extra gastric locations such as cavities and in Para nasal sinuses.[8]

In study done by deveney et al , It was demonstrated that 43% of GERD patient with positive H.pylori t had laryngeal or pharyngeal mucosal changes.[9]

A previous study which was carried out in Egypt by youssef and ahmed ,it was shown that 57% of cases with chronic laryngitis infection were positive using HPSA [helicobacter pylori stool antigen][10]

It was shown the incidence of H.pylori among LPRD patient was 64% patient , and it has been mentioned that HPSA has very reliable result showing a high sensitivity and specificity also in evaluating the response to treatmen and eradication of infection.[11]

Borkowoski etal showed a strong relation between eradication of H.pylori infection and clinical improvement in patient having comorbidities with H.pylori and chronic laryngitis.[12]

in a study done to determine the effect of medical treatment ,it has been shown that in management of chronic pharyngitis ,antibiotics that are effective in eradication of H.pylori can be used to decrease the symptoms of pharyngitis,[13]

In managing chronic laryngitis drug therapy consists of acid suppression with proton pump inhibitor [PPIs],as it assists diagnosis ,it is proved that 70% response rate will be detected.[14]

In a study conducted by burduk pk et al ,it was proved that H.pylori was identified in almost 50 percent of the patients complaining from benign laryngeal disease.[15]

In a study carried out by abdellah RA et al, it was shown that there were (55,2 %) of patient suffering from chronic laryngitis had GERD .[16]

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OUTCOME OF INITIAL 100 CASES OF ENDOSCOPIC DACRYOCYSTORHINOSTOMY IN KIRKUK

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ABSTRACT

This study aimed at determining the effect and safety of endoscopic dacryocystorhinostomy (ENDO-DCR) in initial 100 cases of nasolacrimal duct obstruction. This study was done in Kirkuk general hospital from 2010 to 2017 with a total of 100 cases. A standardized method was applied to all cases through employing an endonasal technique to the lachrymal sac. Then, an operative resection was applied to the mucosa of nose, lacrimal bone and a part of the anterior maxilla. Next, a complete removal of the medial wall of the lacrimal sac was done. A tube of canalicular silicone intubation was placed for 6 months after operation. The key results of such measures were epiphora resolution, lack of discharge and clearness of the ostium. The success of ENDO-DCR method with adjunctive tube of canalicular silicon intubation was demonstrated in 80 cases (80%) and 10 cases represented acceptable improvements. However, there were minor complications faced during or after operation period. Finaly Endoscopic dacryocystorhinostomy is a safe and effective method for treating nasolacrimal duct obstruction in adults and children with nasolacrimal duct obstruction and epiphora.

Keywords: Epiphora, Nasolacrimal duct obstraction, Epiphora, DCR.
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النتائج المبدئية لمائة حالة لتصليح القناة الدمعية عن طريق التنظير الانفي الجراحي في كركوك

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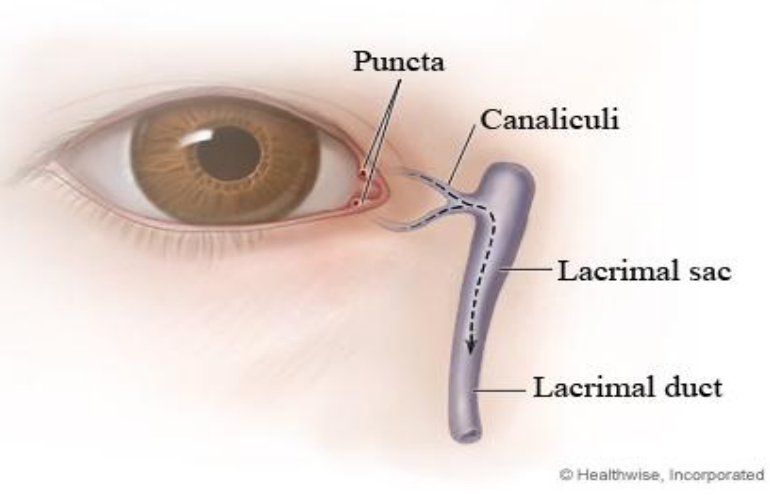
الملخص

الغاية من هذا البحث لبيان النتائج المبدئية لمائة حالة لتصليح القناة الدمعية عن طريق التنظير الانفي الجراحي في كركوك, اجري هذا البحث في مستشفى كركوك العام من سنة 2010 الى سنة 2017 وبحدود 100 مريض كانون يعانون من زيادة وافراط في دمع العين وبصورة مستمرة نتيجة لانسداد القناة الدمعية.حيث تم اجراء تصليح القناة الدمعية لهم عن طريق التنظير الانفي الجراحي. وكانت نتيجة العملية اختفاء الاعراض في 80 بالمائه من المرضى . مع تحسن ملحوظ في عشرة بالمائة من المرضى, وتوصلنا الى نتيجة ان عملية تصليح القناة الدمعية عن طريق التنظير الانفي الجراحي امينة وكفوءة مع مضاعفات بسيطة وقليلة نسبيا وبالاستنتاج نوصي باجراء التنظير الانفي الجراحي لانسداد القناة الدمعية بدلا من الطريقة التقليدية عن طريق الشق الجراحي وما يتركه من اثار على الوجه.

الكلمات الدالة: فرط تدمع العين, انسداد القناة الدمعية , تدمع العين , تصليح القناة الدمعية بالناظور DCR

1. Introduction

The purpose of the nasolacrimal system is to drain tears from the ocular surface to the lacrimal sac and finally the nasal cavity. Blockage of the nasolacrimal system can cause tears to flow over the eyelid and down the cheek. This is known as epiphora. The parts of nasolacrimal drainage system are puncta, canaliculi, lacrimal sac and nasolacrimal duct.



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In adults, primary acquired nasolacrimal duct obstruction (NLDO) represents a popular reason for epiphora. This disease is more common in women about 4-5 times (1). Several factors have been regarded in the acquired NLDO etiology. Chronic inflammation is the most common factor (2). In addition, local trauma and iatrogenic causes comprising complications of surgeries of rhinoplastic and maxillary sinus, and repair of midfacial fracture are supposed to be among other causative factors (2). In 1893, Caldwell first proposed the external approach. Since 1904, the external and endonasal approaches have been the surgical treatment accepted for this disease (3,4). Closing the opening of rhinostomy was regarded a major reason for surgical failure in external DCR. In external DCR, some methods have been proposed in order to provide a permanent opening of rhinostomy after the completion of mucosal healing. These methods include employing silicone stent, applying mitomycin-C to the opening of rhinostomy and stitching the mucous flaps. In the endonasal DCR, inserting the silicone stent represents the most normally favored method (5). Some studies believe that surgical consequences of endoscopic DCR are improved by employing silicone stent. In contrast, other works argue that this stent causes an operative failure because of the formation of granulation tissue and other complications, such as punctual erosions and incision of canaliculi.

Accordingly, this paper was conducted to assess the outcomes of initial 100 cases of ENDO-DCR. Ophthalmologists prefer applying the external approach as a traditional technique to reach the bone. After that, an external osteotomy is performed, the mucosa of nose is opened and the flaps of lacrimal sac are formed from outer side to inside. The approach of endoscopy-assisted endonasal happens in the opposite way. At first, a flap of nasal mucosa is formed, and then osteotomy of endonasal bone is performed to uncover the lachrymal sac and its marsupialization to inner part of the cavity of nose. The endoscopic detection and observation of the whole lachrymal sac was really excellent. The ratios of success related to such method through employing both methods, namely the external and endoscopic ones, have been greater than 90% as applied by experts.

The endoscopic approach has a number of advantages including minor traumatization, preserving the function of lacrimal pump and reducing time of surgery. Rate of success related to endoscopic DCR has been analogous to rates of the classical external method with low rates of illness and the probability to manage concurrent sinonasal illnesses (6,7).

2. Patients and Method

Design of the Study

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A series of retrospective single surgeon case was carried out. Hence, the evaluation of 100 endoscopic DCR processes was performed through utilizing charts and records of hospital, focusing on gender, age, clinical presentation, symptom, result, period of removing silicone tube and period of follow- up. From 2010 to 2017, patients were observed primarily or an ophthalmologist referred them. Table (1) clarifies the statistical data of patients. All adult patients were exposed to a preoperative evaluation of lacrimal punctae and medial canthal area (with irrigation). The epiphora etiology was diagnosed as acquired or congenital. The symptom for endoscopic management was continuous epiphora in spite of probing/irrigation, epiphora with crusty discharge or frequent dacryocystitis. The children age ranged between 3-18 years old. As an outcome, the total success was described by the complete removal of symptoms as proved by no discharge or tearing. On the other hand, the incomplete success was described by minor discontinuous tearing with important improvement in comparison with the status before operation. Finally, the anatomic success was described by total success (no more complains of epiphora) as well as incomplete success (postoperative improvement, exposed ducts and clearness of ostium on irrigation, with continuing minor complaints). Endoscopic evaluation was applied to the ostium of all the recurring cases.

Table 1. Statistical data of 100 patients who experienced endoscopic dacryocystorhinostomies and presentation before surgery

AGE OF PATIENTS	AGE 3-18 YEARS	AGE 18-40 YEARS	AGE 40-60 YEARS	TOTAL NO
N0 OF PATIENTS	27 (27%)	59 (59%)	14 (14%)	100
MALE	9	15	6	30
FEMALE	18	44	8	70
RATIO OF FEMALE / MALE	2%	2.9%	1.3%	70/30= 2.3%
EPIPHORA	15	20	4	39
DACROCYSTITIS	10	30	8	48
MUCOCELE	2	9	2	13

3. Techniques of Operation

General anesthesia was applied for performing Endoscopic DCR. The patient was lying down with elevating the head 15 degrees. After reducing the mucosa of nose by using a packing gauze saturated with a combination of 1:200,000 epinephrine and 2% lidocaine, the same solution was used to filtrate the mucosa that surrounds the lacrimal sac. An endoscope with 4 mm diameter, 0 or 30 degrees was

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utilized. A sickle knife was used to make a vertical mucosal incision 8 mm frontal from the uncinate process attachment at the lateral wall of nose. Then, it was expanded from just above the frontal attachment of the mid turbinate to that of the lower turbinate (Fig. 1A).

The elevation of mucous flap was done backward off the maxilla bone. After that, cutting forceps were used to remove it (Fig. 1B). Next, rongeurs and diamond bur of DCR were used to gently remove bone that covers the lacrimal sac until the sac was broadly visible to the fundus level (Fig. 1C). Removing all bone that covers the common opening of canalicular is important. A metallic probe of lacrimal was passed through inferior canaliculi and gently pushed medially to tent the sac lumen and facilitate the incision on the sac. Then, a no. 12 blade was used to make a horizontal incision on the lower border of the visible wall of sac. Once the lumen was identified, a slit knife was used to make a vertical incision, which was expanded to the sac fundus. The creation of a flap of an anteriorly based lachrymal sac was done. Then, this flap was everted and mended to exactly face the mucosa of nose (Fig. 1D).

A tube of silicone bicanalicular is positioned if it is intended (Fig. 1E). The visible sac was lightly filled with a small patch of gel foam for keeping the flap in position during the initial period of healing. There should be a light nasal packing unless there is associated surgery of nose. Oral antibiotics, ophthalmic drops and nasal steroid spray were prescribed for each patient after operation. Patients were observed frequently for nasal dressing. The application of nasal irrigation with saline was done to avoid the creation of crust. After six months, the silicone tube was removed.

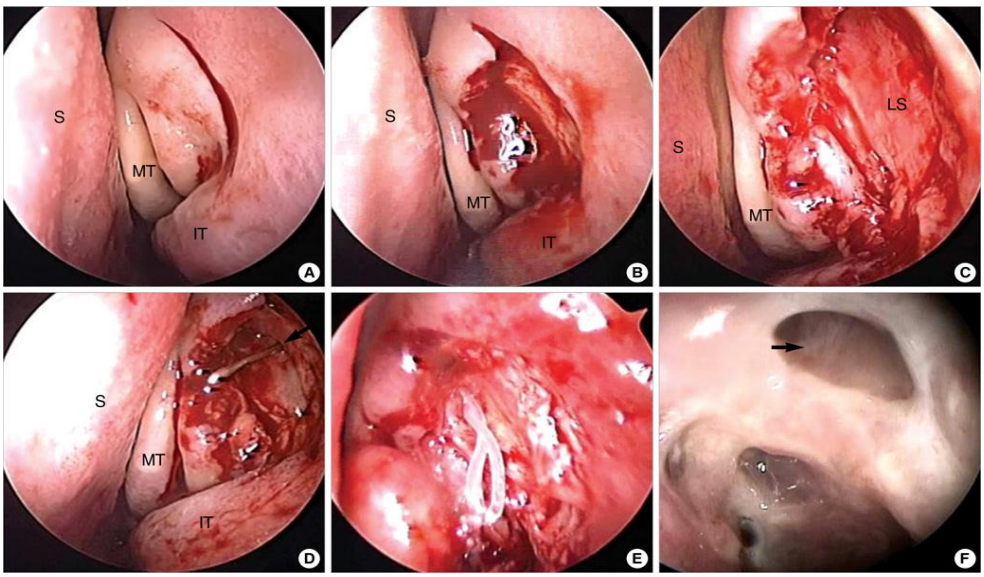

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Fig.1

Operative procedure of ENDO-DCR (S refers to septum; MT is middle turbinate; IT indicates inferior turbinate; LS is the lacrimal sac). (A) making a columnar mucous incision at the lateral wall of nose. (B) Elevating and resecting the mucosal flap. (C) Removing the maxilla bone that covers the lachrymal sac. (D) Everting and adjusting the flap of anteriorly based lachrymal sac to exactly oppose the mucosa of nose. Notice that the opening of joint canalicular (shown with arrow) is observable. (E) Positioning the tube of silicone bicanalicular. (F) The result of nasal endoscopy within six months after surgery. The opening of rhinostomy (arrow) is broad and clear.

4. Care After Surgery and Follow- up

On the next day after surgery, all patients were discharged. Eye drops (topical combination of antibiotics and steroids) were prescribed for ten days. Instructions were given to the patients/parents on using saline nasal spray for nasal mucosal decongestion (3) times per day for one week. Upon discharge, the examination of patients was performed. The removal of silicone tubes was done after 6 months of surgery. As for young children, sedation was administered to them. Depending on illnesses or other associated pathology, outpatient clinic follow- up was applied to patients at least 2 years.

5. Outcomes

Table **2** shows the classification of etiology into two types: congenital (20 cases – 20%) and acquired (80 cases – 80%). During the period of this study, 100 endoscopic DCRs were applied. Demographics were categorized into three groups according to age: 3-18; 18–40 and 40-60 years old.

Table 2. Demographics categorization according to etiology, age and gender

Etiology (total group: *n* = 100)			
Congenital	20(20%)		
Acquired	80 (80%)		
SPLIT BY AGE	3-18	18-40	40-60
CONGENITAL	10	10	0
ACQUIRED	17	49	14
TOTAL	27	59	14

Table 2. Demographics categorization according to etiology, age and gender

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GROUPS	CONGENITAL	ACQUIRED
MALE	5	18
FEMALE	15	62
FEMALE/ MALE	15/5	62/18

Table (3). Outcomes

	NO EPIPHORA	PART IAL IMPROVEMENT	NO IMPROVEMENT	REVISION SURGERY
SUCSESS RATE	80 (80%)	14(14%)	6(6%)	4(4%)

Table (4). revision cases

Total number of recurrence	Revision cases	No epiphora	2 patients refuse surgery
6	4	4	

Table (5). COMPLICATIONS

Total number of cases	TUBE EXTRUSION	ADHESION
5(%)	2 (%)	3(%)

As for the children group, 20 cases (<18) were identified (as shown in Table **1**) with an average age of 7. The female to male ratio was 15/5. Postoperatively, 2 patients were identified with extrusion of the silicone tube. There were no reports on ecchymosis of the cheek. The rate of complications after surgery was 5% of total cases with a total of 100 endoscopic processes. Silicone tubing was applied to all patients. The mean time for removing silicone tube was 6 months. Generally, there was outpatient clinic follow- up for 2 years as a minimum.

6. Discussion

In fact, the ENDO-DCR technique is considered a commonly accepted and safe procedure coequal with the 'traditional' external technique. It resulted in good rates of success and low rate of complications, which was found to be 5% in this study. Success rates of revision surgery showed noticeable improvements. In this study, the average time of follow- up was 2 years.

As mentioned earlier, the results were widely different during the last ten years (81–97%) (Tarbet & Custer 1995 (6); Sprekelsen & Barberan 1996 (7); Hartikainen et al. 1998 (8); Woog et al. 2001 (9); Durvasula & Gatland 2004 (10); Tsirbas et al. 2004 (11); Ben Simon et al. 2005 (12); Leong et al. 2010 (13); Roithmann et al. 2012 (14). Based on this study averages, the anatomic success

in all different groups was 80% complete recovery and 14% with satisfactory recovery. This result agrees with that of the studies conducted during the last ten years.

Previous studies indicated that there are relatively low results of revision surgery with an irregular estimation of 50%. These studies demonstrated that it is not likely for failure after initial adjustment to benefit from further adjustments (Tarbet & Custer 1995 (6); Sprekelsen & Barberan 1996 (7); Hartikainen et al. 1998 (8); Woog et al. 2001 (9); Durvasula & Gatland 2004 (10); Tsirbas et al. 2004 (11); Ben Simon et al. 2005 (12); Leong et al. 2010 (13); Roithmann et al. 2012 (14)). However, and based on the current results, it can be concluded that failure after initial adjustment can benefit from further redo operation. This failure could be due to fibrosis, granulation tissue or local synechiae of the ostium.

In addition, the less recurrent reasons include bone neogenesis, inadequate osteotomy, inadequate opening lachrymal sac and failure to locate the lachrymal sac throughout surgery (Leong et al. 2010 (13); Roithmann et al. 2012 (14)). The external DCR has been considered a typical technique in managing NLDO for a long time (Hartikainen et al. 1998 (8)). Here, there is a disadvantage represented by external scarring that is resulted from cutaneous incisions and disruption of the medial canthal ligaments that could cause dysfunction of lacrimal pump (Tarbet & Custer 1995 (6); Ben Simon et al. 2005 (12)).

Further intranasal problems can be addressed by the surgeon through applying the endoscopic approach. Such problems include obstruction by a deviated septum. Different from the nasolacrimal structure in adults, specific anatomic aspects in children, especially those older than 6 years, worth further investigation (Mahapankar et al. 2002(15); Berlucchi et al. 2003(16); Gupta & Bansal 2006(17); Eloy et al. 2009(18); Celenk et al. 2013(19)). The smaller dimension of anatomic operation, such as the vestibule and cavities of nose, poses a technical endoscopic challenge. It is recognized that in those children, the ostium of the nasolacrimal duct has a highly variable form because of the largeness of the inferior turbinate (Leibovitch et al. 2006 (20); Eloy et al. 2009 (18). This paper described the pediatric group individually. Hypertrophy of the inferior turbinate and strictures are often just part of the normal anatomic spectrum in the pediatric group. The air path in nose is much narrower compared to that of adults. This causes additional problems in accessibility and visualizations. In children, septoplasty is normally avoided due to having future implications on facial growth.

7. Conclusion

Results of this paper concurred with other similar studies. They showed that the endonasal DCR is an effective and safe technique for adults and children with continuous epiphora. The study also proved that surgery of redo could be beneficial in improving symptoms. Finally, it is necessary to have a comprehensive information about the anatomy of nose and operative mechanisms. If they are applied well, they can result in promising outcomes.

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Study of Factors Influence to Poor Attendance for the Second Diagnostic Visit to the Pen Program of Early Detection of Diabetes and Hypertension in PHCCs in Kirkuk, Iraq

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ABSTRACT

PEN was held in PHCs in Kirkuk city by WHO. To prevent and control the NCD and to provide a cost-effective approach for early detection of D.M and hypertension by recognition the preclinical stage of the disease.

With selecting 5 random chosen PHCCs in first primary health district, for the month between (January to end of July) 2018. With using very simple techniques, in very limited resources for PHCs, The results showed the highest percentages of attending the NCD unit was in Tareeq – Baghdad, while the lowest in Tissin, and the females are more than the males. The highest percentage registered for hypertension was in Baglar , while the highest positive screened was in Tissin. For D.M. the highest no. of visitor registered for first and second visit was in Baglar. This gives as a conclusion that there was a defect in screening program regarding the second visit in NCD unit in PHCs.

Keywords: Risk factors, PEN, Poor attendance, Screening.

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اسباب عزوف المراجعين عن الزيارة التشخيصية الثانية لبرنامج الكشف المبكر عن ارتفاع ضغط الدم والسكري في قطاع كركوك الاول.

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الملخص

تم أدخال برنامج حزمة البيانات للكشف عن الأمراض غير الإنتقالية في المراكزالصحية في كركوك لغرض السيطرة على هذه الأمراض ومن ضمنها مرض السكر والضغط وذلك لتوفير الكلفة العلاجية بعد ظهور أعراض الإصابة بالمرض عن طريق الإستدلال بالكشف المبكر عن الحالات قبل ظهور الأعراض في وحدات الأمراض غير الإنتقالية في المراكز الصحية . وتم إختيار عشوائي لخمسة مراكز صحية ضمن قطاع كركوك الأول للفترة في (كانون الثاني لغاية نهاية تموز) 2018، بإستخدام ابسط الأجهزة والوسائل للكشف المبكر مع الأخذ بنظر الإعتبار ضعف التجهيزات اللأزمة للوحدات هذه.

وأظهرت الدراسة أن أعلى نسبة مئوية لمراجعي هذه الوحدات هم في (م.ص. طريق بغداد) وأقلها في (م.ص.تسعين)،وأن نسبة الإناث هي أعلى من نسبة الذكور بصورة عامة .وبخصوص مرض أرتفاع الضغط ، فإن الدراسة أظهرت أن أعلى نسبة سجلت في (م.ص.بكلر) في حين أن أعلى كشف تم إيجابي في (م.ص.تسعين) للضغط.

أما بخصوص مرض داء السكري فإن أعلى نسبة عدد المراجعي للزيارة الاولية للكشف عن السكري والزيارة الثانية للتشخيص سجلت في (م.ص.بكلر). هذا يدل عللى أن هنالك ضعف في أداء الوحدات الخاصة بالأمراض غير الإنتقالية للمراكز الصحية في عملية الكشف المبكر للإمراض في خلال الزيارات الأوللى والثانية للوحدات .

الكلمات الدالة: عوامل الخطورة , حزمة الخدمات الاساسية للامراض غير الانتقالية , ضعف الزيارات , الكشف الاولي.

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1. Introduction

For primary health care, the world health organization (WHO) had held a congress in 2008 on the intervention of a package of essential non-communicable disease (NCD) in a low resource setting. The plan was implemented for the prevention and control of NCD. In primary health clinics (PHCs), one of the key components of the project was to provide a cost-effective approach for early detection of diabetes, cancer and chronic respiratory disease. The project was given the abbreviated term WHO-PEN [1]. According to WHO statistics, the global world is divided into different geographic regions accordingly: 1) Africa; 2) America; 3) Eastern Mediterranean; 4) Europe; 5) South-east Asia; and 6) Western Pacific. The largest increase in the death rate from cardiovascular disease, diabetes, respiratory disease and cancer may occur in developing countries [2].

To correctly implement the project, the assessment of capabilities and health infrastructure is one of the important steps of integrating the WHO PEN into primary health care. This tool will gather information about program priorities, health care management, financial decentralization and community involvement [1].

To reduce the burden of NCD, the main strategy is effective and affordable medicines availability. Unfortunately, they are unavailable in many countries, or they are of poor quality [3]. The expectation of benefits of implementing WHO PEN primary are: 1) equity and efficiency of PHC; 2) prevention and control of major NCD; and 3) health care workforce reinforcement [4]. It is well known that the screening in asymptomatic populations is optimal under severe conditions. The disease has a public health impact and understood natural history. Furthermore, it has a recognizable preclinical stage and available tests to detect preclinical stages of being reliable and acceptable. Moreover, the cost-benefit of the test is reasonable, and finally, the screening will be a systematic ongoing process and not isolated one-time effort [5].

This study aims to explore the factors that affect the weak response of attendants to primary health care centers for the diagnostic second visit following the first screening one. So, it is a trial to resolve the problem according to available facilities. For this purpose, we develop conceptional project for a package of essential NCD interventions and strength the disciplines of PEN WHO of PHC in the following conditions: 1) Low-resource settings; 2) early identification of serious NCD by new, available and affordable technologies; and 3) medicines and risk prediction charts as assistant tools. Consequently, developing operational integration of essential NCD intervention into primary care followed by evaluation of its impact. It is worth mentioning that all the mentioned steps are the principle rationale for right functioning health systems as a vital process for the control and prevention of NCDs [6].

2. Methodology

A cross-sectional design was applied for the current study. A convenient sampling method was selected to detect early screening for NCD through the available statistic (retrograde), gathered from the first primary health district, which population is 458984.

3. Materials and Methods

3.1 Study Sitting

Kirkuk governate is one of the federal governate of Iraq, situated between the north and middle of the country. According to 2017 statistics, its population is about 1,059,876 people.

3.2 Sample Frame

The sample frame consisted of the population of Kirkuk of which 458984 is the study sample of the first primary health district.

3.3 Inclusion and Exclusion Criteria

All permanent residents of 20 years and above were included in the study involving both genders. Internally displaced persons and those living in temporary settings were excluded in agreement with WHO PEN project. According to WHO PEN project, one of the fundamental points in the road map of success of the program is the availability of essential and affordable technologies (which are currently utilized internationally to the management of NCDs).

It is important to mention that the real challenge in the application of the project is the poor investment and inadequate supply in many low-resource settings. Consequently, there is a need for a prioritized set of technologies to be available. The best currently available equipment in Iraq are as follows:

1. Stethoscope.
2. Blood pressure measurement device.
3. Weighing machine.
4. Glucometer.
5. Blood glucose test strips.
6. Urine test strips.
7. Urine ketone test strips.
8. Electrocardiography.
9. If the resources permit these equipment's should be added, as nebulizer and defibrillator.

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Contrastly to these, the unavailable equipment's in primary health care centers (PHCCs) in Iraq are as follows:

1. Thermometer.
2. Peak flow meter.
3. Spacer for inhalers.
4. Blood cholesterol assay.
5. Lipid profile.
6. Serum creatinine assay.
7. Troponin test strips.
8. Urine microalbuminuria test strips.
9. Tuning fork oscillators.

This secondary study was an exploratory design of an information system of the PHC center. The information included the total number of people enrolled in the PEN program with a risk of NCD who were tested for screening and advised for the diagnostic visits (second visit) following the first visit.

The samples were stratified according to age, gender, smoking, habit, history of hypertension, diabetes mellitus and the risk assessment of the next ten year of CVD (according to official questionnaire form of ministry of health, NCD department (that included the previously mentioned information).

4. Results

Out of the five randomly selected PHCCs, a convenient sample was selected in the current study including all the attendants for a screening of hypertension and diabetes mellitus. The aging was (≥ 20 years) for hypertension, while it was (≥ 40 years) for diabetes mellitus. Table 1 shows the total number of attendants to the five selected PHCCs for the period of the study from January – July 2018. The highest number of the attendants was found in Al-Salam PHCC (7394) followed by Tareeg Baghdad (6897), and the lowest was in Baglar (4629).

Table 1: Total number of attendants to the PHCCs.

Month	PHCC				
	Al-Mansoor	Tissin	Tareeg-Baghdad	Al-Salam	Baglar
January	923	907	1225	1073	1299
February	791	808	1036	1102	562
March	752	826	848	1191	643

April	779	770	1146	1083	637
May	549	617	952	1007	478
June	427	455	866	1012	412
July	850	812	824	926	598
Total	5071	5195	6897	7394	4629

Table 2 illustrates the total number of attendants to the NCD unit of the PHCCs during the study period. It is clear that the highest percentage who attended the unit was in Tareeq-Baghdad (42.7%) and the lowest percentage was in Tissin (7.35%). More specifically, as listed, Table 3, regarding gender distribution, it is clear that the attending of females was higher than males as 1962 (63.1%) versus 1144 (36.8%).

Table 2: The total number of attendants to the NCD unit of the PHCCs.

PHCC	Total number of visitors to PHCC	Number of visitors to NCD	Percentage (%)	Number of registered cases	Percentage (%)
Al-Mansoor	5071	1930	38.0	475	9.3
Tissin	5195	382	7.35	194	3.7
Tareeg-Baghdad	6897	2944	42.7	463	6.7
Al-Salam	7394	624	8.43	539	8.0
Baglar	4629	1822	39.3	1435	31.0
Total	29186	7702	26.3	3106	10.6

Table 3: Gender distribution of the registered cases in the PHCCs.

PHCC	Number of males	Percentage (%)	Number of females	Percentage (%)	Total
Al-Mansoor	107	22.5	368	77.4	475
Tissin	69	35.5	125	64.4	194
Tareeg-Baghdad	149	32.21	314	67.8	463
Al-Salam	219	40.6	320	59.3	539

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Baglar	600	41.8	835	58.1	1435
Total	1144	36.8	1962	63.1	3106

Table 4 summarizes the total number of registered cases and screened for hypertension (20 – 39 years). The results show that it is clear that the highest percentage registered was in Baglar (38.8%) while the highest positive screened was in Tissin (38.1%). The overall positive screened attendants were 753 (24.2%) out of total attendants. Table 5 presents the total number of registered cases and screened for diabetes mellitus. The highest percentage registered in the first visit was in Al-Salam (35.1%) regardless of Tissin due to the small number of registered cases in it, which was 13. Whereas, the highest number registered in first and second visits was in Baglar.

Table 4: Results of the screened for the 1st visit and 2nd visit for hypertension to the PHCCs

PHCC	Number of positive	Percentage (%)	Number of negative	Percentage (%)	Total	2nd visit
Al-Mansoor	37	7.7	438	92.2	475	0
Tissin	74	38.1	120	61.8	194	4
Tareeg-Baghdad	79	17.0	384	82.9	463	2
Al-Salam	185	34.3	354	65.6	539	5
Baglar	378	26.3	1057	73.6	1435	7
Total	753	24.2	2353	75.7	3106	18

Table 5: The screening result of diabetes mellitus (40 years and more) for 5 PHCCs.

PHCC	Number of positive	Percentage (%)	Number of negative	Percentage (%)	Total	2nd visit
Al-Mansoor	26	17.3	124	82.6	150	0
Tissin	5	38.4	8	61.5	13	0
Tareeg-Baghdad	0	0	54	100	54	0
Al-Salam	19	35.1	35	84.8	54	3
Baglar	285	33.1	565	66.4	850	7
Total	335		786		1121	10

5. Discussion

Health improvement generally requires strengthening four crucial domains of the health care system: 1) health care delivery; 2) public health; 3) researches; and 4) personal health management. In contrast, poor quality services may be due to: 1) inaccessible data and information; 2) lack of knowledge; and 3) poor documentation. Whereas, the ministry of health (MOH) is concerned in improving primary, secondary and tertiary health services [7].

In high-income countries, the total coverage of health insurance plays crucial role in ratio of adherence to medical services. In contrast, the low and middle income once in which these services are limited (8). It is worth mentioning that the adherence is defined as the extent to which a person's behavior, taking medications, following a diet and lifestyle changing corresponds with agreed recommendations from a health care provider (14).

MRFIT study in 1982 had a prospective cohort study through which 12,866 men were followed up for seven years after full advice was applied to them. With a comparative control group, the result showed that ischemic heart disease (IHD) mortality was reduced by 22% more in the international group; but it was not significant statistically. This reason was the selected sample had changed their lifestyle and studied preventive method [9].

In Iraq, the NCD accounts for 44% of death, as diabetes, stroke, heart disease, cancer, and respiratory disease are the leading cause of mortality. According to Iraqi Family Health Survey, it was clear that the most frequently reported non-communicable conditions were high blood pressure (41.5/1000) population followed by diabetes 21.8/1000 population. Whereas, the stepwise risk factor survey 2006 showed that 37.7% had hypercholesterolemia. All these factors have led to strengthening the integration of NCDs into PHCCs is partially successful and gradually moving towards 50% coverage. Furthermore, focusing on Hypertention, Diabetes Mellitus and recently on Asthma and risk prediction of Cardiovascular diseases [10].

According to the results obtained from MOH statistics, the total screened cases was high in 2009 as (18.5%), which declined to (13.6%) in 2016. This may be related to many factors influencing the weak adherence to negative themes of the patients attending the PHCCs in addition to overcrowding and unstable security. Furthermore, the lack of well-trained health care workers regarding the knowledge and skills in dealing with these cases. Moreover, the lack of equipments that are necessary to

implement the program. Besides, the weak or the absent role of the media on disseminating the new and emergent health projects regarding the setup of early detection. Additionally, the non-availability of information regarding patient's perspectives on the disease aspects may be one of the most contributing factors regarding poor or non-adherence (11).

According to the official reports of MOH, since the application of the PEN program, it was documented that the rate of screening for hypertension was in the range of (14.3 % - 19.3%). According to the annual evaluation between years (2009-2017), the highest rate being in the year 2009 and the lowest in the year 2015 (19.3%, 14.3%). Additionally, regarding the workup on Diabetes Mellitus, it was proved that the rate of positive screening for diabetes mellitus was 13.6% in 2016. Besides, the number of diagnosed cases was 7235, while the number of confirmed cases of diabetes mellitus was only 10. Furthermore, regarding the loss to follow up, it is proved that more than 50% are not attending for follow up after three visits, although it is obvious that the program was feasible [12].

For the management of NCD worldwide and specifically in low or limited-resource countries as Iraq, the need for equipments are: 1) Electrocardiogram (ECG); 2) body meters; 3) glucometers; and 4) the consumables like (risk assessment forms, ECG jelly, glucometer strips and batteries) need to be available [13]. Consequently, the factors affecting adherence are as follows:

1. Socioeconomic as long-distance from treatment settings.
2. Health care workers related factors, like a lack of knowledge of health professionals about the program.
3. The nature of the illness.
4. Patient-related factors, such as:
    a) Forgetfulness.
    b) Misconceptions.
    c) Difficulty in understanding the condition.
    d) Feeling that the program is not important to overcome the resistance to continue the adherence. Consequently, follow up more appropriately to rationalize and restructure the works job and schedules to accommodate and accept the projects' new applications.
    e) Patients are under anxiety about the diagnosis and fear about the disease if diagnosed and continuous dependence on drugs if needed.

6. Conclusion

In this article, we investigated the factors that impact on the weak response of attendants to primary health care centers for the diagnostic second visit following the first screening one. We conclude that

there was a defect in the screening program for early detection of diabetes mellitus and hypertension in PHCCs in Kirkuk regarding the second visit for confirming the diagnosis.

7. Recommendations

The followings are recommended from the results of the study:

1. Strengthening the education program in health promotion in PHCCs.
2. Investment of social media to explore the importance of vitality of early diagnosis of non-communicable diseases in Iraq.
3. Concentrating the act on supplementing the required equipments in PHCCs.

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Application of Polyethylene Cling Film to Underpin Moist Burn Wound Therapy

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ABSTRACT

Background

Dermal burns (partial thickness burns) are the most painful trauma with two types of pain background pain with additional procedural pain, one of the best tolerable mode of treatment that commonly used now adays is treatment with MEBT ointments to maintain the moist and warm wound environment suitable for regeneration of epidermal cells, and to reduces pain. Moist wound dressings retain moisture, heat, body fluids, and biofilm with medication. The assumption is that the polyethylene film will maintain the ointment and its effect more than to be used merely.

Patients and methods

Prospective study to evaluate treatment of patients with partial thickness burns conservatively with MEBT ointment as a control group and MEBT ointment + Cling Film, 63 patients being admitted to the burn center at Azadi teaching hospital during a period of one year starting from June 2018 till June 2019. The inclusion criteria including all patients between 10-95% partial thickness burns of various age, sex and skin types.

Results

Very much decrease in procedural and background pain, better joint movement in physiotherapy decrease in crust formation, increase maceration of eschar, better cost- effectiveness, less days of hospital stay**.**

Aim; in Iraq circumstances we have to use the most cost effective measures to reach our goals in managing the burn wounds the moist trend which is now being proved it gives better healing with less pain, with best criteria of wound dressing .

Conclusion

Easily applicable, less painful, non-coasty over all, better condition of patient during course of management, reduced length of hospital stay and lower treatment costs, appropriate wound healing with living tissue , less joint stiffness problems.

Keywords ; partial thickness burns, MEBT ointment + Cling film, burn pain,
MEBT ointment =Moist Exposed Burn Therapy Ointment.
BSAB = Body surface area burned.
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تعزيز تاثير طريقة المرهم المرطب المكشوفة لجروح حرق الادمة بواسطة غشاء البولي اثيلين

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نبذة مختصرة

الخلفية؛ تعد الحروق الجلدية (حروق السماكة الجزئية) أكثر الصدمات المؤلمة مع وجود نوعين من آلالام ، الالام الخلفية المتواصلة مع ألم إجرائي إضافي ، أحد أفضل طرق العلاج المسموح به والتي يشيع استخدامها الآن هو العلاج بمراهم MEBT للحفاظ على بيئة الجرح الرطبة والدافئة مناسبة لتجديد خلايا البشرة ، وتقليل الألم. تحتفظ ضمادات الجرح الرطبة بالرطوبة والحرارة وسوائل الجسم والأغشية الحيوية مع الدواء. الافتراض هو أن فلم البولي إيثيلين سيحافظ على المرهم وتأثيره أكثر من استخدامه بصورة مجردة.

الطرق والمعالجة: دراسة مستقبلية لتقييم علاج المرضى الذين يعانون من حروق سماكة جزئية بالعلاج التحفظي مع طريقة المرهم المرطب المكشوفة لجروح حرق الادمة بواسطة غشاء البولي اثيلين، 63 مريضاً يتم إدخالهم إلى مركز الحروق بمستشفى آزادي التعليمي وحدة الحروق وخلال فترة عام واحد تبدأ من يونيو 2018 حتى يونيو 2019 تتضمن معايير الاشتمال جميع المرضى الذين تتراوح نسبة مساحة الحروق لديهم من 10 إلى 95٪ من الحروق الجزئية السمك (حروق الادمة) من مختلف أنواع العمر والجنس والجلد.

النتائج:

انخفاض كبير في الألم الإجرائي والخلفي ، وحركة المفاصل أفضل في العلاج الطبيعي ،هذه الطريقة تنقص في تكوين القشرة ، وتزيد من التئام الجلد المحروق ، وفعالية تكاليفية أفضل ، وأيام أقل من الإقامة في المستشفى.

الهدف من الدراسة؛

في ظروف العراق ، علينا أن نستخدم أكثر التدابير فعالية من حيث التكلفة للوصول إلى أهدافنا في إدارة معالجة جروح الحروق ، وهو الاتجاه نحو طرق المعالجة الضمادات الرطبة التي ثبت الآن أنها تعطي الشفاء بشكل أفضل مع ألم أقل ، مع أفضل معايير الضماد المطلوبة.

الاستنتاج:

قابلة للتطبيق بسهولة ، وأقل ألمًا ، وغير مكلفة على الإطلاق ، وحالة أفضل للمريض أثناء التداوي ، وخفض مدة الإقامة في المستشفى ، وتضميد الجروح بالشكل المناسب مع الأنسجة الحية ، وتقليل مشاكل تصلب المفاصل.

الكلمات الدالة: حروق سمك جزئي ، مرهم MEBT + فلم التشبث (البولي اثيلين)، ألام الحرق .

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1-Introduction

A prospective randomized clinical study using of Beta sitosterol[1] containing ointment which is a sesame-oil-based ointment for burns produced in China[2]. As a local conservative treatment remedy in acute partial thickness burns, Moist Exposed Burn Ointment (MEBO) was more expensive but without any wound crust (pseudo-eschar layer) formation [3], healing being faster, and functional hand movement was better, with less post-burn complications[4-6]. Dr. Ioannovich J. [7-8] finding that;

1. MEBO contributes to a better-quality scar after epithelial repair than other local agents.
2. Local substances applied to burn wounds may provoke a debriding effect. In a moisturized environment where eschars are easy to remove in small pieces MEBO showed an efficient debriding effect compared with the other remedies .
3. MEBO significantly accelerates the wound healing process in partial-thickness burns
4. Measurement of moisture in the wound may give additional information regarding the wound healing process. MEBO manifests a moisturizing environment for a longer period than other substances.

Clinical and experimental investigations by Rongxiang [9] ChuanjiU [10], and Yunying [11],' have indicated that MEBO has the following therapeutic effects:

1. Analgesia: it improves pain threshold in partial-thickness burns;
2. Anti-shock: MEBO decreasing water loss from the burn wound surface and improves microcirculation.
3. Anti-bacterial: MEBO changes bacteria milieu, inducing a decrease in bacterial virulence and invasive capacity, as well as change sensitivity to antibiotics; it also improves wound's local and systemic immunity;
4. MEBO enhances regeneration.
5. MEBO improves quality of newly healed skin and reduce formation of hypertrophic scars.

Wound planimetry was analyzed in Department of Plastic Surgery, Hadassah Hospital, Nahariya, Israel (The trends of wound-healing histological patterns were better for MEBO subgroups on days 14 and 21 than with bacitracin[12.] Moist exposed burn ointment (MEBO) is a good option for management of partial thickness burns owing to the soothing effect, joints movement, easier handling, and better healing properties[13].

The laboratory test also found no side effect of MEBO ointment to routine test of blood and urine, liver function or renal function[14]. The ointment can promote the liquefaction and discharging of the damaged tissues of skin to enforces continuous drainage of the wounds, so the wounds can be kept in a moist wound milieu suitable for regeneration to ensure healing in the shorter time[15]. However, most chemical substances retard wound healing. Several natural remedies such as honey are believed to protect wounds from infection and promote healing but it need more frequent dressing changes episodes per one day make it inconvenient for patient[16]. Moist ointment beta sitosterol promotes the healing, reducing pain and controlling infection. It is also a cost-effective therapy as it accelerates healing and reduces hospital stay[17].

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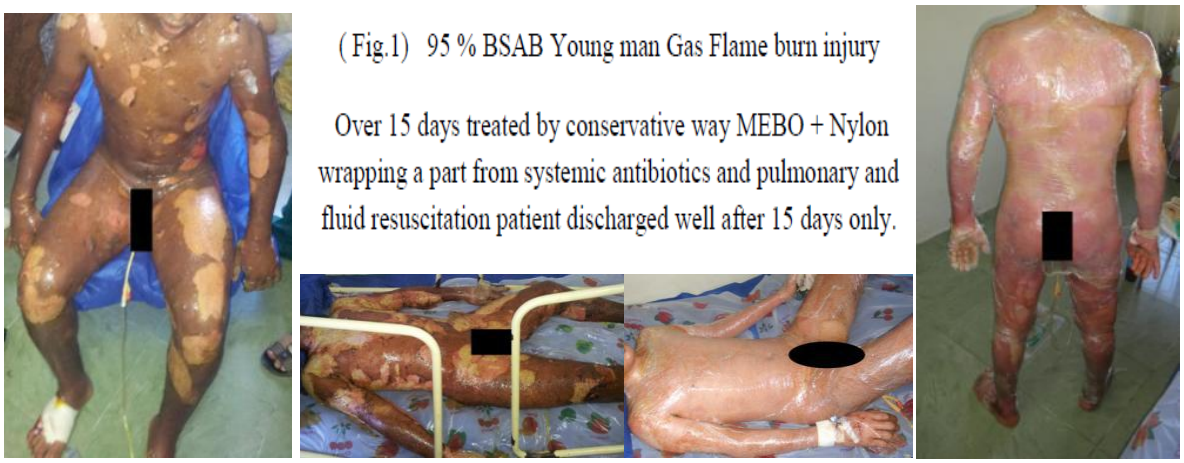
2-Patient and method

Between JUNE 2018 - JUNE 2019; sixty three patients of variable age twenty five female & thirty eight male are treated by this trend with burn injuries sizes from 10% BSAB – 95% BSAB and with various causes electrical flash , thermal flame or scald burns all are selected according to clinical assessment of burn depth we plan to use conservative management MEBO treatment and wrapping wounds with a cling films (falcon-cling-film ®) and changing the dressings three times daily (eight hourly) using new dressings we used for hands polyethylene gloves (Fig.1-5).



(Fig.1) 95 % BSAB Young man Gas Flame burn injury

Over 15 days treated by conservative way MEBO + Nylon wrapping a part from systemic antibiotics and pulmonary and fluid resuscitation patient discharged well after 15 days only.

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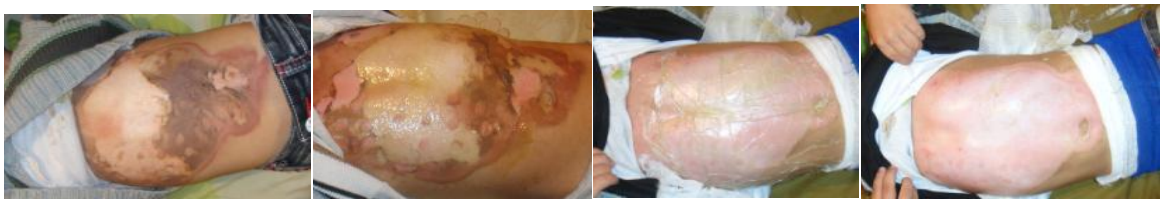
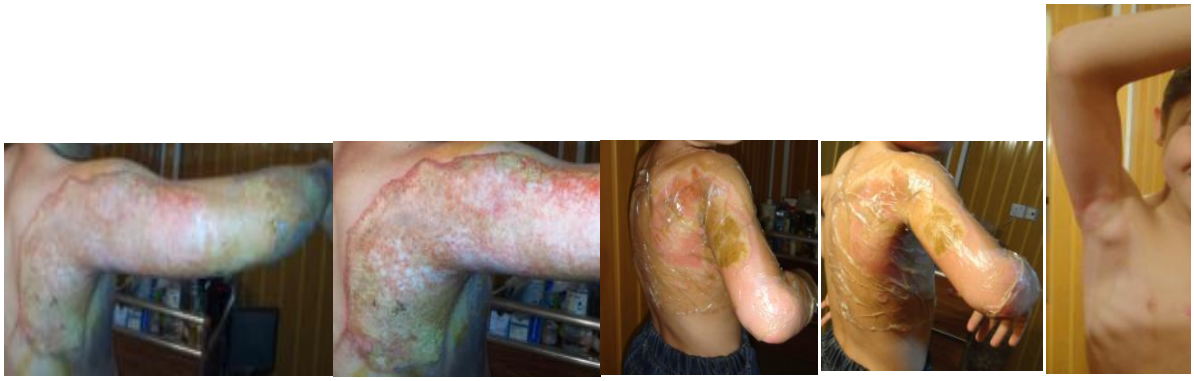
(Fig.2) About 32 % BSAB in a twenty seven years woman with Deep partial thickness take 21 days to re-epithelialize reaching the final picture (notice the budding)



(Fig.3) MEBO WRAPPING with cling food nylon OVER 9 DAYS



(Fig.4) 8 % BSAB Moderately deep partial thickness Electrical flash burn treated by MEBO & Nylon for twenty-one days

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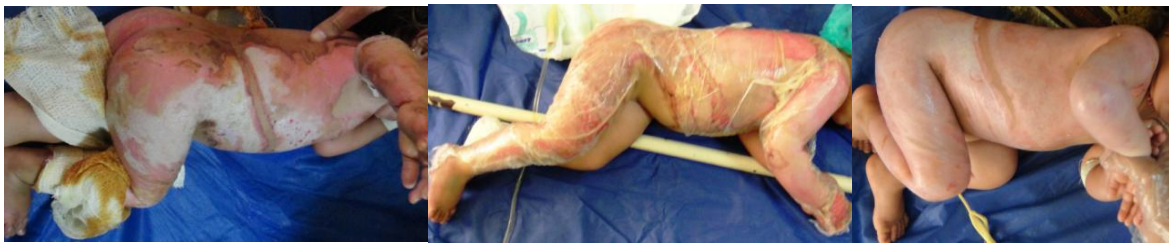
(Fig.5) Patient treated conservatively MEBO &Wrapping cling nylon after 9 days discharged healthy with lesser amount for analgesia needed during hospitality



In comparison with the control group who are with same patients' criteria 29 patients 18 males 11 females our selection are depending on burn depth all were with partial thickness burns treated by MEBO four to six times daily after once daily bathing each day.

To make a informative measurable data we grouped the patients according to age, with comparable surface area involved but still we need more studies to evaluate this simplified trend of management.

Directions for use: Apply directly onto wound immediately at a thickness of not more than 1mm. Re-apply every 4 to 6 hours if wound is exposed, and 10 to 12 hours if wound is covered [18].

3-RESULT

1. Analgesia with MEBO and Cling film nylon wrapping reduces pain in partial-thickness burn wounds. (figure 6)[19].

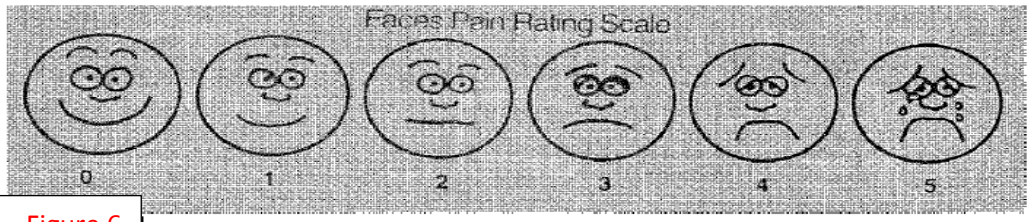


Figure 6 Faces pain rating scale. Patients point at the face that best describes the pain they are suffering. A laughing face means no pain at all; a sad, crying face describes intensive, non-bearable pain.

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Dressing assessment score	**Group MEBO +Cling Film** **34 Patients**	Mean value at 5 th day since burn	**Group MEBO** **29 Patients**	Mean value at 5 th day since burn
Pain score[11] *0-5*	Procedural pain	2 (no pain)	Procedural pain	4 (sad 4-6 times daily)
	Background pain	1 (no pain at all)	Background pain	2 (no pain)
Wound texture at dressing change time	Always wet, moist , Eschar macerated		Simi wet, less moist, Eschar crustated	
Joints movements disability score *0-3*	Active by patient	1	Active by patient	2
	Passive by nurse	0 =No restriction	Passive by nurse	1
Patient discomfort score	The bad odor	Less	The bad odor	intolerable
	Skin covered with ointment and nylon	Tolerable	Skin covered with ointment	intolerable
	Linen of bed	Less frequent changes	Linen of bed	frequent changes

(Table 1); MEBO and Cling film being more accepted by patient and care giver.

Age	**0-1**	**1-2**	**2-5**	**6-15**	**16-55**
NO.	**4**	**8**	**3**	**6**	**13**
Mean % BSAB	**13.75**	**19.25 %**	**22.3 %**	**18.12 %**	**31.53**
Mean LOH. stay in days	**6.25 days**	**13.4 day**	**8.33 day**	**9 days**	**14.1 day**

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(Table 2); Age groups of MEBO + Cling film (34 pt.)

Age GROUP	(0-1)Years old	(1-2)	(2-5)	(6-15)	(16-55)
NO.	0	2	5	3	19
Mean % BSAB	0	23.5%	19.8	31%	27.6%
Mean LOH. stay in days	0	17.5 day	16.6 day	12.3 days	20.6 day

(Table 3); Age groups of MEBO only (29 pt.)

From these tables 2 &3 MEBO and Cling film being with a lesser duration of hospital stay with a comparable larger BSAB.

2-Cost –effectiveness**;**

Comparable Age GROUP	(16-55) year		Mean Length Of stay in Hospital stay in days
groups MEBO only	5.31 tubes/day		20.6 day
Mean % BSAB	19 pt.	27.6 %	
MEBO + Cling film	3.61 tubes/day		14.1 day
Mean % BSAB	13 pt.	31.53 %	

(Table 4); MEBO and Cling film being less cost and more effectiveness.

4-Discussion

Despite the plethora of technologic advances for the preparations for management of partial thickness dermal burns (**ANTIBIOTCS** as Bastracin oint. , Silver Sulfa Diazin, Fucidic acid oint)., or the use of **BIOLOGICAL coverings** Amniotic membrane, Alloderm sheets , Integra, or even Allograft , or using **SYNTHETIC materials** like Mepitel & Biobrane , Acticoat ,Opsite or Tegaderm, a polyurethane occlusive film. Trans Cyte Temporary Skin Substitute. The most common and practically used now in developing country and some large countries (like China , India) is MEBO but the restriction was in the cost , availability , and frequency of application needed to reach our goal of effective covering may need doubling the amount we needed for managing our patients with this trend we need less amount of ointment to be applied and with more effective results we get.

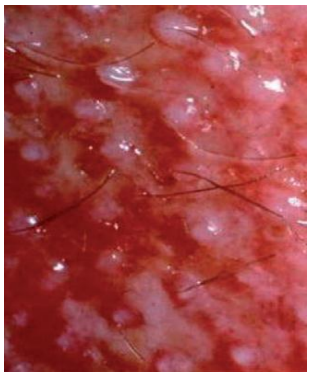
The analgesia with MEBO and Cling film nylon wrapping reduces pain in partial-thickness burn wounds to a degree some patients not need analgesia at all after the third day while the needs for

analgesia usually three times on less extant twice with changing dressing and bathing were it was painful leads to bouts of fears make the patient uncooperative and with psychological insult , another problem hence this trauma may lead to increase in adrenalin release leads to increase in catabolic state and more worsening to his condition.

The patient was less prone to electrolytes imbalance; the bouts of cold sensation which usually burn patients are complaining of it are less, ileus which is usually seen due to potassium reduction are less, urine output were easily controllable in them.

The joints of this group of burned patient are easily moved during physiotherapy which is a usual challenge in the burn patient.

Epidermal budding in a healing deep second-degree burn. Each bud of epidermis is arising from a single hair follicle (skin appendage). The source of the new keratinocytes is arising from a collection of stem cells, known as 'the bulge'.



This shows epidermal budding in a relatively deep second degree burn. Each bud of epidermis is arising from a single hair follicle. The source of the new keratinocytes is thought to be a collection of stem cells, known as 'the bulge'[9]
Total Burn Care, David N. Herndon 2006

It also reduces healing time in partial-thickness burn less needs for bathing needs. No pseudo-eschar had seen like that seen in SSD.

MEBO improves scar formation and contributes to the formation of a smooth, thin, and aesthetically acceptable healing.

5-Conclusion

Easily applicable, non-coasty over all, less pain, better condition of patient course of management, reduced length of hospital stay and lower treatment costs, appropriate wound healing with living tissue, less joint stiffness problems, these are main advantages of this procedure in comparison with other techniques.

6-Recommendations

We recommend application of this trend in our country and in all developing countries that are missing the ability of application of coasty products like integra which still the best to be applied because not need to be changed, but it s not easily available because it is very expensive.

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USAGE OF ALTERNATIVE AND COMPLEMENTARY MEDICINE AMONG PATIENTS WITH DIABETES MELLITUS AT DIABETIC CLINIC IN KIRKUK CITY / IRAQ

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ABSTRACT

Constrained investigation on the utilization of complementary alternative medicine (CAM) among patients with diabetes mellitus (DM), especially in essential - care settings. This investigation looks to comprehend the commonness, types, consumptions, dispositions, convictions, and impression of CAM use among patients with DM visiting outpatient diabetic facility. use of CAM has increment lately. We assessed the augmentation CAM utilization by patients with diabetes mellitus; in spite of constrained proof bases. The point of this study was to decide the CAM use among individuals with analyzed diabetes mellitus at diabetic facility at Azadi Teaching Hospital. Prospective descriptive cross sectional study; up close and personal meeting poll and self-directed unknown study techniques to get results from 417 patients who were going to Azadi teaching hospital at Kirkuk city/Iraq. The information was analyzed by usage cross-tabulation analysis (X2 test). P value of 0.05 or less is medically significant. Therefor; about Of 417 members were overviewed, around two third of them utilized some type of CAM treatments were the most widely recognized modalities. The consequences of a strategic relapse examination demonstrated that the parallel use design was most clear in the gatherings matured more than 40. Likewise, numerous sociodemographic and wellbeing related qualities are identified with the examples of the parallel utilization of CAM.At end, utilization of CAM especially biologically base CAM treatments is normal and is bound to be utilized by those with diabetes mellitus. it is as yet lacking the proof to reach complete inference about the adequacy of individual herbs and enhancements for diabetes; be that as it may, they are seem, by all accounts, to be commonly sheltered. The accessible information recommend that few enhancements might be warrant further examination.

Keywords DM: diabetes mellitus; CM: conventional medicine; CAM: alternative and complementary medicine; Kirkuk/ Azadi Teaching Hospital Diabetic Clinic.
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أستخدام الطب البديل والتكميلي بين المرضى الذين يعانون من داء السكري في عيادة مرضى السكري في مدينة كركوك – العراق

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الملخص

هناك دراسات محدودة عن استخدامات الطب البديل في علاج مرضى الذين يعانون من الامراض ألمزمنة وخاصة مرضى داء السكر لذا نحن الباحثون قمنا بتنظيم هذه الدراسة لمعرفة عدد ونسبة المرضى الذين يعانون من داء السكر ويستخدمون الطب البديل في علاجه ونوع الطب البديل المستخدم .

ومن الجدير بالذكر ان نوعية الدراسة التي استخدمنها هي دارسة وصفية مقطعية اذا تم اجراء الدراسة في مستشفى آزادي التعليمي / استشارية داء السكر واما عدد المرضى الذين شملتهم الدراسة هو 417 مريض , الثلثين منهم تبين انهم يستعملون الطب البديل وخاصة الاعشاب وبعض النباتات التي هي اكثر شيوعا في الاستعمال والتي تبين انها امينه وليس لها اضرار جانبية

الكلمات الدالة: التركيب النووي، الاستئثارة التجمُعيّة، الطور العشوائي.؟؟؟؟

1. Introduction

Diabetes is one of the main non-contagious illnesses influencing humanity. [1] Diabetes is a standout amongst the most across the board perpetual ailments. As indicated by the World Health Organization (WHO), the quantity of individuals with diabetes ascended from 220 million of every 2009 to 346 million out of 2011, 90% being determined to have diabetes Type 2 (T2DM).[2] 284 million individuals are diabetic worldwide and this figure is anticipated to twofold by 2030.[3] Diabetes, is a malady affected by way of life changes, for example, diet, thus focus of CAM, including nourishing supplements (NSs).[4] It is evaluated more than Diabetes mellitus (DM) is a confused metabolic turmoil, portrayed by high blood glucose level because of the powerlessness of cells to use glucose fittingly. The etiology of sort 1diabetes is the total lack of insulin emission, while type 2 diabetes (DM) is a mix of protection from insulin activity and weakened insulin discharge, which represents over 90% of all diabetes cases[5].Diabetes may prompt microvascular (visual deficiency, chronic kidney disease and neuropathy) and macrovascular (stroke and myocardial infarction) confusions.[6] It is likewise viewed as a vital hazard factor for the advancement of corpulence, hyperinsulinemia, hypertension, dyslipidemia and atherosclerosis. [7] The present treatment for DM incorporates insulin and other oral anti diabetic medications, for example, Sulphonylurea derivatives,

Biguanides, Thiazolidinediones and Alpha glucosidase inhibitors. Be that as it may, these drugs are known to have bothersome reactions, for example, hypertension, dry mouth, clogging, headache, valvular coronary illness and stoutness.[8] To date, normal items still assume a vital job as wellsprings of prescription in avoiding diabetes in this way, the endeavors to find valuable medication possibility to battle diabetic difficulties are going on tenaciously.[9] Diabetes mellitus is an extremely basic medical issue emerge worldwide quickly, due changing the nourishment propensity, way of life and to a great extent utilization of junk food. Significant reason is age of free radical development, free radical generation caused by degeneration of starches, lipid and protein digestion by expanded blood glucose level (hyperglycemia) coming about because of the imperfections in insulin emission, insulin activity or both. Raised glucose generation causes oxidative pressure and subsequently there is increment in mitochondrial receptive oxygen species (ROS), non-enzymatic glycation of proteins and glucose autoxidation.[10] Traditional, complementary and alternative medicine (TCAM) has been a developing region of enthusiasm for ongoing years. The World Health Organization (WHO) has made studies and combination of TCAM as one of its worldwide needs in the forthcoming decade [11] . In the WHO's 2012 study, nations around the globe referred to a scarcity of sufficient research as the most restricting component in enhancing and coordinating TCAM into their national healthcare framework .[11] Reflecting comparative patterns, the Association of Southeast Asian Nations (ASEAN) has made it a need to comprehend the utilizations and practices of TCAM in the locale for better security and monetary control purposes.[12] An ongoing investigation of TCAM in the Gulf State district have high rates of diabetes and CAM use. A study in kingdom of Saudi Arabia uncovered the commonness of CAM utilization for the board of diabetes mellitus was 30%.[13] The pervasiveness of diabetes in Iraq expanded from 5% in 1978 to 19.7% in 2012 [14]. A most current review of CAM using among patients with diabetes mellitus demonstrated a wide distinction in the quantities of CAM clients crosswise over nine countries from 17% to 73%.[2] In Iraq there is no explores completed about CAM usage among diabetic patients; so meaning of CAM . Historically, Complementary and Alternative Medicine is characterized by National Center for Complementary and Alternative Medicine (NCCAM) as gathering of various therapeutic human services frameworks, rehearses items that are not by and by viewed as a feature of traditional medicine.[15] since examines have been demonstrated that the utilization of CAM use is expanding worldwide and that CAM utilize is wide spread even in western nations where they have a propelled national health insurance dependent on front line present day biomedicine.[16] many scientists have been buzzled over conduct of CAM clients that have added to its notoriety. We considered five classifications of CAM as NCCAM[17] grouped into natural item, manipulative and body based practices, mind body remedy, locomotion treatments and entire medicinal frameworks. Explicitly things in the common items allude to nourishing and dietary enhancements that incorporate cereals royal jelly, rich soybean paste, squalene, green vegetable juice, chlorella, ginseng, vitamin B complex, and herbs. The manipulative and body-based practice classification included needle therapy, massage, chiropractic, and reflexology. The classification of mind body remedy incorporates yoga, reflection, hypo gastric breathing, and qigong. Locomotion treatments incorporate extending, and class of entire medicinal framework comprises of CAM treatments, for example, herbaceous drug, needle therapy, cupping, and moxibustion. ver half of US populace on nutrients or minerals enhancements and this utilization has been expanded over recent years.[18] The point of study is to build up the relationship between utilization of CAM treatments and diabetes. The examination is looking at comorbid condition and CAM into any utilization versus no utilization, where as a general rule, CAM treatments speak to a heterogeneous gathering of practices that vary in sort, use, and assortments of proof on viability

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2-Patients and Method

Design of study: It is descriptive, observational, prospective, cross-sectional study contain vis-à-vis meet with patient relying upon an auxiliary poll which was produced rely upon our study questions. This investigation was completed at Diabetic Clinic in Azadi teaching hospital at Kirkuk city. We created survey to evaluate CAM by patient with DM more than 16 months (from February 2018 to May 2019) ; Addition to getting some information about CAM utilizes, question investigated the sorts of CAM utilized dependent on US National Center for Complementary and alternative medicine (NCCAM) order of CAM (17), recurrence of CAM use in diabetes mellitus, advantage, and trouble of CAM, persistent use CAM unveil this utilization to their doctors notwithstanding data was gathered on respondents' age, sex, instructive status, diabetic complexities.

Population of study: A questionnaire was created to assess the use of CAM by 417 patients with diabetes mellitus [type 1 and type 2] between March 2017 to September 2018. The patient the two sexual orientations, more than eighteen years old who going to Diabetic Clinic in Azadi teaching hospital were inquired as to whether they got CAM; if replays were positive so they were called to meet where a basic questionnaires were reply by those patients. The questionnaire comprises of two spaces: first area was included by the demographic information of patient; second area recoded medicinal history of patient, third area required by CAM usage with allopathic drug. Iraq has a national wellbeing administration with consideration being roughly free at purpose of contact.

Consideration criteria: grown-up over 18 years old, determined to have diabetes mellitus .

Rejection criteria: patient with diabetes under 18 years old.

Data analysis: data were dissected with statistical package for social sciences (SPSS verion23) utilizing descriptive statistics. Moral endorsement was acquired from Kirkuk Health Directorate / ethic committee.

3.Results and Calculations

435 questionnaires were returned. 18 patients did not meet in the consideration criteria or deficient questionnaire; principally on the grounds of parlance. 260 (63%) responders had been utilized CAM in earlier year. The connection between CAM utilization and respondents' demographic and diabetes status utilizers on day by day bases appeared (table 1).

Table 2: Proportion (%) of usage of different types of CAM

Variable (417)		Used CAM N(%)	Not used CAM N(%)	Statistics
Gender	Male	107(56%)	85(44%)	X^2=6.53; p=0.01
	Female	153(68%)	74(32%)	
Age	20- 39	43(42%)	28(37%)	X^2=3.18; p=0.20
	40-59	164(66%)	87(84%)	
	60& more	52(55%)	42(45%)	
Educational level	Illiterate	27(25%)	23(46%)	X^2=4.83; p=0.31
	Non formal	29(65%)	16(35%)	
	1ry school	92(69%)	42(31%)	
	2ry school	87(63%)	52(37%)	
	Collage	20(54%)	17(46%)	
	Higher education	7(57%)	6(43%)	
Length of time with DM	<5	50(49%)	52(51%)	X^2=11.86; p=0.008
	5-9	68(72%)	28(28%)	

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	10-15	71(69%)	41(36%)	
	>=15	70(65%)	37(35%)	
Treatment of DM	Diet	9(70%)	5(30%)	X^2=3.04; p=0.39
	Diet & tablet	142(59%)	98(41%)	
	Diet & insulin	51(65%)	28(35%)	
	Diet, tablet & insulin	39(65%)	21(35%)	
Complication of DM	Present	134(73%)	53(27%)	X^2=13.63; p=0.0002
	Absent	127(55%)	105(54%)	
Blood glucose monitoring	Yes	145(63%)	87(37%)	X^2=0.02; p=0.90
	No	116(62%)	71(38%)	

Table 2: Proportion (%) of usage of different types of CAM

CAM types	No.(%) of patients with DM who use CAM (n=260)
Ayurveda	----
Homeopathy	----
Unani	----
Yoga	----
Home remedies	105 (25.17)
Diet	43 (10.3)
Acupuncture	20 (4.79)
Sidhha	---
Massage	---
Herbal	87 (20.86)
Panchakarma	---
Traditional Chinese medicine	---

4.Conclusion

There is high rate of CAM use in patients with diabetes mellitus going to Azadi teaching hospital diabetic clinic in Kirkuk/Iraq. There is likewise a high rate of nondisclosure of CAM use to doctor. There is a proceeding with requirement for wellbeing experts to be increasingly mindful and better prepared so as to advise their basic leadership and correspondence identified with CAM use.

5.Discussion

This study has been demonstrated the pervasiveness of CAM use of adjacent 2/3 among patients with diabetes mellitus going to Diabetic Clinic at Azadi teaching Hospital in Kirkuk city. The predominance of CAM use in patients with diabetes in Kirkuk city is tantamount with that in other comparative examinations in USA (73%)[19] , India(68%)[20] and Mexico (62%)[21] , yet higher in Saudi Arabia (30%)[22] ,Australia(24%)[23] and UK (17%)[23] ; This might be identified with various definition for CAM and contrasting time spans and looked for in this research to utilize the NCCAM order of CAM and analyze use over earlier year. 66% of CAM clients had utilized CAM in the treatment of their diabetes, demonstrating that 63% of patients with diabetes mellitus in this study have utilized

CAM so as to deal with their diabetes mellitus. This is higher than in a past report in Saudi Arabia [22] , in spite of the fact that they took a gander at utilization of customary drugs alone. Anyway 97% of respondent in this investigation utilized normal prescriptions as the frame off CAM to deal with their diabetes, proposing that different components are adding to higher uses in Kirkuk. Of note it isn't obvious from Saudi study as to time span used to decide CAM pervasiveness and a shorter time allotment (not exactly a year as this investigation could represent some variety. This study affirms an affiliation appeared past examinations with longer length of diabetes mellitus and nearness of inconveniences [13] . This isn't astonishing as patients may try to deal with their diabetes mellitus and mitigate entanglements proactively by utilizing CAM than utilize ordinary drug and observed it to be lacking. An investigation in USA distinguished those matured more than 65 years as being multiple times bound to utilize CAM than those under 65 years age. Other than time of patients, a higher probability of CAM use has been appeared with different factors as a higher instructive level[13,15] and blood glucose observing at home[13] . In this search, as in comparable examinations to Saudi Arabia [4, 13] , there was no affiliation found between these variables and the utilization of CAM by patients with diabetes mellitus in Kirkuk. This might be identified with the generally more youthful period of beginning of diabetes mellitus in the populaces in Iraq. Anyway in Saudi researches[4, 13] we discovered relationship between utilizing of CAM and being female. The social setting and varying jobs and wellbeing convictions in Iraq between the sexual orientations may add to this. It seems likely that customary CAM clients (characterized as day by day use in this research) vary from the individuals who use it at times. They are probably going to be a progressively essential gathering as they are bound to endure reactions and conceivable collaborations with different drugs. A specific concern has been the low exposure rate of CAM use to doctor. This may identified with in sufficient specialist understanding correspondence. The non-revelation rate in this research of 62% falls inside the range from different researches of 43% - 65% [21,12.15] . Of enthusiasm of in this research is that ordinary clients of CAM and those utilizing CAM for the treatment of their diabetes mellitus (the two gatherings at conceivably higher hazard) are bound to illuminate their doctor of their CAM use. There is little uncertainty that the utilization of both herbaceous medication and traditional prescription can result in unfriendly impacts from herb- medicine association [13] . In this way, healthcare approach is that patients ought to get proof based CAM data about adequacy, viability, reactions and conceivable associations, to advise their basic leadership identified with CAM use. A quality of this research is that it has analyzed CAM use in populace of high predominance of diabetes mellitus and has characterized classes of CAM and time periods. A shortcoming is that it was unrealistic to determine an arbitrary example and alert should be practiced in summing up end from reasonable example.

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The role of IFN-gamma in Humoral immune response for HCMV antigens among pregnant women

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ABSTRACT

Background: Human cytomegalovirus (HCMV) is a highly host-specific virus belongs to the β-herpesvirus subfamily, which is a leading cause of congenital infections. The immune cytokines such as Interferons-gama (IFN-γ) may have direct inhibitory effects on HCMV replication and control of viral infections.

Aim of the study: This research aims at determining the specificity of anti-HCMV antibodies for different HCMV antigens in relation to serum INF-γ levels.

Materials & Methods: A cross sectional study was carried out in Kirkuk governorate from April 2018 to June 2019. The number of pregnant women understudy was **400** women presented to some private medical laboratories. The pregnant women were examined for the seroprevalence of HCMV-IgM and IgG by using ECLIA technique then their specificities determined for different HCMV antigens by using line immune assay, In addition to estimation the level of serum INF-γ levels by using ELISA technique.

Results: The rate of HCMV-IgG , HCMV-IgM and both HCMV-IgG and IgM at the same time were 288(72 %), 32(8%) and 18(4.5%) respectively. Regarding the specificity of the determined HCMV-IgM to various **HCMV antigens** (**IE1, CM2, p150, p65, gB1** and **gB2**), the highest rate of HCMV-IgG was **96.25%** specific for gB1 antigen, while highest rate of HCMV-IgM were **96.87%** specific gB1 and p150 antigen. Considering the specificity of these antibodies for the examined antigens in relation to serum INF-γ levels, the highest of pregnant women with increased INF-γ level had antibodies for IE1 antigen.

Conclusions: There was significant relation of the serum INF-γ level with specificity of anti-HCMV antibodies to divers HCMV antigens.

Keywords: HCMV; INF-γ; CM2; IE1; gB.

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دور الانترفيرون – كاما في الاستجابة المناعية الخلطية لمختلف المستضدات الخاصة بفيروس المضخم للخلايا البشري بين النساء الحوامل

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الملخص

الفيروس المضخم للخلايا البشرية هي من الفيروسات ذات الخصوصية العالية للمضيف والتي هي من العائلة الفرعية بيتا التابعة لعائلة فايروسات الهيربس وتسبب إصابات ولادية. السايتوكينات المناعية منها الانترفيرون– كاما ربما لها دور مباشر في تثبيط تكاثر الفيروس والسيطرة على الإصابة الفيروسية.

يهدف البحث الحالي الى تحديد خصوصية الأجسام المضادة لمختلف مستضدات الفيروس المضخم للخلايا البشري وعلاقتها بمستوى الانترفيرون– كاما بين النساء الحوامل.

أجريت دراسة عرضية في محافظة كركوك في الفترة من نيسان 2018 ولغاية حزيران 2019 على 400 امراة حامل راجعن عدد من المختبرات الأهلية في كركوك لمعرفة نسبة انتشار الاجسام المضادة نوع (ام و جي) الخاصة بفيروس المضخم للخلايا البشري باستخدام تقنية التألق المناعي الكيمروكيميائي ومن ثم معرفة خصوصيتها لعدد من المستضدات الخاصة بالفيروس باستخدام اختبار المناعة الخطي. إضافة الى تقدير مستوى الانترفيرون– كاما في المصل باستخدام تقنية الايلايزا.

أظهرت الدراسة معدل الانتشار المصلي للأجسام المضادة نوع (ام) و (جي) والاثنين (ام وجي) معا في نفس الوقت هي 288(72٪) ، 32 (8٪) ,18(4.5٪) على التوالي. فيما يتعلق بخصوصية تلك الأجسام المضادة للمستضدات المختلفة (IE1، CM2، p150، p65، gB1 و gB2)؛ حيث أظهرت الدراسة ان اعلى النسب للأجسام المضادة نوع (جي) 96.25٪ لها خصوصية للمستضد gB1، بينما اعلى النسب للأجسام المضادة نوع (ام) 96.87٪ لها خصوصية للمستضد gB1 و p150. أما بالنسبة لعلاقة مستوى الانترفيرون– كاما بخصوصية الاجسام المضادة لتلك المستضدات ؛ حيث كانت النسبة الأعلى من النساء اللواتي لديهن زيادة في مستوى الانترفيرون– كاما كانت لديهن اجسام مضادة خاصة بالمستضد IE1 .

كما أظهرت الدراسة علاقة معنوية بمستوى الانترفيرون– كاما في المصل بخصوصية الأجسام المضادة لمختلف مستضدات الفيروس المضخم للخلايا البشري.

الكلمات الدالة: gB ; IE1 ; CM2 ; INF-γ ; HCMV .

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1. Introduction

Human-CMV is one of eight human herpesviruses belongs to the family of Herpesviridae, prototype of the subfamily of β-herpesvirinae, described as an important etiological agent of intrauterine infection in pregnant women which may lead to miscarriage, stillbirth and fetus developmental retardation . Virions of HCMV consist of the four major components that are characteristic for herpesvirus particles: the liner double-stranded DNA (dsDNA) genome that is packaged in an icosahedral capsid, the tegument, and the viral envelope[1-6].

The spectrum of humoral responses against HCMV includes: structural tegument proteins like (pp65 and pp150), envelope glycoproteins (predominantly gB) and non-structural proteins as(IE1 and CM2) [7,8] . HCMV expresses viral proteins to modulate the host immune responses at every step of its life cycle, which play a crucial role in viral pathogenesis [9]. Interferon gamma (IFN-γ) is a longest soluble cytokine that is the only member of the type II class of interferons. It is a critical for innate and adaptive immunity against viral infection and is an important activator of macrophages and inducer of MHC II molecule expression. IFN-γ is produced predominantly by NK and natural killer T (NKT) cells as part of the innate immune response, and by CD4 Th1 and CD8 cytotoxic T lymphocyte (CTL) effector T cells once antigen-specific immunity develops[10].

IFN-γ are part of the innate immune response to viral infections and confer potent antiviral effects. IFN-γ, binds to a cell-surface receptor, which is known as the type II IFN receptor. Upon viral infection, IFN-γ activates cellular signaling networks. Because of the vital role of in IFN-γ response, it is reasonable that a virus may encode a protein to modulate modulate immunity response by IFN-γ-induced antiviral responses[9].

2. Methodology

A cross sectional study was carried out in Kirkuk governorate from April 2018 to June 2019. The number of pregnant women understudy was 400 women presented to some primary health care centers and some private medical laboratories. The pregnant women were examined for the seroprevalence of specific HCMV-IgG and HCMV -IgM antibodies, then their specificity determined for specific HCMV antigens. Five to Seven ml of blood was collected by vein puncture using 10 ml disposable syringe from each women enrolled in this study. Blood samples were placed into sterile test tubes, lefted for 30 minutes at 37 °C then were centrifuged at 3000 rpm for 15 minutes then the clot removed and re-centrifuged the remain for 10 minutes twice time and the obtained sera aspirated and transferred into clean test tube. Label was fixed on each test tube which then stored in deep freeze at -20°C for late serological testing for detecting specific HCMV-IgG and HCMV -IgM by using

Electro-chemo-luminescence (ECLIA) technique, then their specificity and reactivity determined for specific HCMV antigens (IE1, CM2, p150, p65, gB1 and gB2) by using line immune assay line immune (RecomLine; Mikrogen, GmbH, Germany) . In addition to estimation, the level of serum IFN-γ levels by using ELISA technique. A computerized statistically analysis was performed using Statistical Package for Science Services (SPSS) version 17, Inc.USA. The comparison was carried out using of Chi-square (X^2) and Probability value (P). The $P \leq 0.05$ was categorized as statistically significant (S), and less than 0.01 was considered as highly significant (H.S.) and greater than 0.05 was considered as non-significant(N.S.).

3. Results

A total 400 pregnant women were examined ,their ages ranged between (18-42 years old) , for detection of specific HCMV antibodies HCMV-IgG (+), HCMV-IgM (+) and both HCMV-IgG(+) and IgM(+) at the same time were 288(72%), 32(8%) and 18(4.5%) respectively as shows in Table 1

In the present study, form the total 288 pregnant women with HCMV-IgG (by ECLIA) were 80 pregnant investigated by using recomline technique for the determination their reactivity to various HCMV antigens (IE1, CM2, p150, p65, gB1 gB2) separately, the highest rate of HCMV-IgG among the total 80 examined HCMV-IgG (+) seropositive were 77 (96.25%) positive for gB1 antigen and with different rates for other used antigens as shows in Table 2 .

Regarding the specificity of the determined HCMV-IgM to various specific HCMV antigens, the rates of HCMV-IgM among the total 32 examined HCMV-IgM seropositive were 31(96.87%) specific for each p150 and gB1 antigens as shown in Table 3.

The rates of HCMV-IgG against HCMV-antigens among the total 21 pregnant women with both HCMV-IgM and IgG at the same time, the highest rate of HCMV-IgG were 17(94.44%) for gB1 antigen as shown in Table 4 .

Rates of HCMV-IgM against various HCMV antigens among the total 18 pregnant women with both HCMV- IgM and IgG at the same time by line immunoassay, the highest rate were 17(94.44%) for gB1 as shown in Table 5 .

Regarding the relation of serum IFN- γ level with specific anti-HCMV antibodies in pregnant women. The rates of increased serum IFN- γ level higher than decreased levels, so the highest rate (61.12%) of increased serum IFN- γ level was seen in pregnant women with both HCMV- IgM and IgG at the same time, while the highest rate of normal serum IFN- γ level were seen among pregnant women with HCMV- IgG as shown in Table 6.

Considering the relation between the specificity of anti-HCMV antibodies against various HCMV antigens and level of serum IFN- γ level among seropositive pregnant women, the highest rate

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of increased serum IFN- γ level was 36.36% seen in women with HCMV-IgG for IE1 antigenas it is shown in Table 7 .

Regarding the relation between the specificity of anti-HCMV antibodies against various HCMV antigens and level of serum IL- IFN- γ level among seropositive pregnant women, the highest rate of increased serum IL- IFN- γ level was 65.0% seen in women with HCMV-IgG for IE1 antigenas it is shown in Table 8.

Table 1: Seroprevalence of HCMV-IgG and HCMV-IgM among pregnant women by using ECLIA technique.

Antibodies state	Seroprevalence rate	
	No.	%
HCMV- IgM (-) / IgG (+)	288	72.0
HCMV- IgM (+) / IgG (-)	32	8.0
HCMV- IgM (+) / IgG (+)	18	4.5
HCMV- IgM (-) / IgG (-)	62	15.5
Total	400	100

Table 2: Rates of specific HCMV-IgM (-) / IgG (+) for various HCMV antigens by using line immunoassay.

HCMV antigens	HCMV-IgG of HCMV-IgG (+) /HCMV-IgM(-) (n=80)			
	Positive		Negative	
	No.	%	No.	%
IE1	44	55.00	36	45.00
CM2	34	42.50	46	57.50
p150	75	93.75	5	6.25
p65	42	52.50	38	47.50
gB 1	77	96.25	3	3.75
gB 2	56	70.00	24	30.00
X2 = 93.31 P =0.00001 H.S.				

Table 3: Rates of specific HCMV-IgM (+) / IgG (-) for various HCMV antigens by using line immunoassay.

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HCMV antigens	HCMV-IgM of HCMV-IgG (-) /HCMV- IgM (+) (n=32)			
	Positive		Negative	
	No.	%	No.	%
IE1	20	62.50	12	37.50
CM2	21	65.62	11	34.38
p150	31	96.87	1	3.13
p65	20	62.50	12	37.50
gB 1	31	96.87	1	3.13
gB 2	23	71.78	9	28.22
X2 = 23.9 P = 0.0002 H.S.				

Table 4 : Rates of specific HCMV- IgG in pregnant women with HCMV-IgM and IgG at the same time for various HCMV antigens by using line immunoassay.

HCMV antigens	HCMV-IgG of HCMV-IgG (+) /HCMV- IgM (+) (n=18)			
	Positive		Negative	
	No.	%	No.	%
IE1	9	50.00	9	50.00
CM2	7	38.88	11	61.12
p150	16	88.88	2	11.12
p65	10	55.56	8	44.44
gB 1	17	94.44	1	5.56
gB 2	12	66.67	6	33.33
X2 = 23.39 P = 0.0003 H.S.				

Table 5: Rates of specific HCMV- IgM in pregnant women with HCMV-IgM and IgG at the same time for various HCMV antigens by using line immunoassay.

HCMV antigens	HCMV-IgM of HCMV-IgG (+) /HCMV- IgM (+) (n=18)

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	Positive		Negative	
	No.	%	No.	%
IE1	9	50.00	9	50.00
CM2	7	38.88	11	61.12
p150	15	83.33	3	16.67
p65	9	50.00	9	50.00
gB 1	17	94.44	1	5.56
gB 2	11	61.12	7	38.88
X2 = 12.33 P = 0.03 Significant				

Table 6: Relation of HCMV- antibodies with serum IFN- γ Level.

HCMV antibodies	Serum IFN- γ Level							
	Normal		Increased		Decreased		Total	
	No.	%	No.	%	No.	%	No.	%
HCMV- IgM (-) / IgG (+)	52	65.00	25	31.25	3	3.75	80	100
HCMV- IgM (+) / IgG (-)	12	37.50	19	59.37	1	3.13	32	100
HCMV- IgM (+) / IgG (+)	7	38.88	11	61.12	0	0	18	100
X2 =10.80 P = 0.02 Significant								

Table 7: Correlation between serum IFN- γ level and specificity of HCMV-IgG to various HCMV antigens.

HCMV antigens	Serum IFN- γ level							
	Normal		Increased		Decreased		Total	
	No.	%	No.	%	No.	%	No.	%
IE1	26	59.09	16	36.36	2	4.55	44	100
CM2	21	61.76	11	32.35	2	5.89	34	100
p150	51	68.00	21	28.00	3	4.00	75	100
p65	26	61.90	14	33.37	2	4.77	42	100
gB 1	51	66.23	23	29.87	3	3.90	77	100
gB 2	35	62.56	18	32.14	3	5.35	56	100
X2 =2.76 P =0.036 Significant								

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Table 8: Correlation between serum IFN- γ level and specificity of HCMV-IgM to various HCMV antigens.

HCMV antigens	Serum IFN- γ level							
	Normal		Increased		Decreased		Total	
	No.	%	No.	%	No.	%	No.	%
IE1	7	35.00	13	65.00	0	0	20	100
CM2	9	42.85	11	52.38	1	4.76	21	100
p150	11	35.48	19	61.29	1	3.22	31	100
p65	8	40.00	12	60.00	0	0	20	100
gB 1	11	34.48	19	61.29	1	3.22	31	100
gB 2	9	39.13	13	56.52	1	4.35	23	100
X2 =4.12 P =0.045 Significant								

4. Discussion

Human-CMV is the most common worldwide congenitally transmitted pathogen and is a major global contributor to long-term neurologic deficits, including deafness, microcephaly, neuro-developmental delay, as well as fetal loss and occasional infant mortality [5]. The present study revealed that the HCMV infection was relatively common among pregnant women, that the HCMV-IgM(+)/IgG(-) was found in 72.0% of pregnant women , while the HCMV-IgM(+)/IgG(-) and HCMV-IgM(+)/IgG(+) were 8.0% and 4.5% respectively among them as they are shown in .. Table 1.

There was wide ranges of rates of HCMV-IgG and HCMV-IgM in the present study and Most studies in the different places and countries recorded this variation rates, this may be attribute to many factors including the difference in the kinetics of anti-HCMV-IgG and anti-HCMV-IgM responses during the infection and the violation of systemic and local intercellular interrelations between B and T-cells, leads to the imbalance in the antibodies production [5,11].

The importance of antibody response for diagnostic purposes led to significant insights into the kinetics of the antibody response against human cytomegalovirus-specific proteins and thus a better understanding of the function of the humeral immune mechanisms. These explorations showed that the synthesis and catabolism of HCMV-specific antibodies is a highly dynamic and complex process, with major differences between primary and secondary infections[12] . Therefore this study conducted to determine the specificity of these HCMV antibodies to various specific HCMV antigens, (IE1, CM2, p150, p65, gB1 and gB2) and revealed that the highest rates of HCMV antibodies were

reactive with gB1 antigen which were 96.25% for HCMV-IgG and `96.87% for HCMV-IgM , while 94.44% for each of IgG and IgM of pregnant women with IgM and IgG at the same time with significant relation *(P< 0.05)*..Tables 2 and highly significant relation *(P< 0.01)* .. Tables 3-5. This finding may be due to the ability of HCMV gB1 antigen to trigger and stimulating the humeral immune response depending on its characters and structure.

The gB structure provides a starting point for elucidation of its antigenic and immunogenic properties. So the humeral immune response directed against gB is of particular interest [13]. The gB plays an important role in virus infectivity, cell to cell spread and is a major target for antibody mediated immunity and is the major antigen for the induction of neutralizing antibodies against HCMV. The gB considered to be a multifunctional envelope component responsible for virion entry, cell to cell spread, syncytium formation and is the major target for neutralizing antibodies[5,14].

The entry of HCMV into cells requires the conserved gB, thought to function as a fusogen and reported to bind signaling receptors. gB also elicits a strong immune response in humans and induces the production of neutralizing antibodies although most anti-gB Abs are non-neutralizing [13].

The second most common HCMV antigens have high reactivity rates with HCMV antibodies in the present study was p150 antigen which were; 93.75% ,96.87%,88.88% and 83.33% for HCMV-IgG, HCMV-IgM, HCMV-IgG of both seropositive and HCMV-IgM of both seropositive at the same time respectively with highly and significant relations ..Tables 2-5. The immunological reactivity for HCMV-encoded protein antigens is characterized by a high frequency of HCMV-specific CD4+ and CD8+ T lymphocytes and stable levels of antiviral antibodies. The predominant CD8+ T lymphocyte response following HCMV infection was initially proposed to be directed against a limited set of virus-encoded antigens and the dominant targets of HCMV-specific CD8+ T lymphocytes were pp150 and one of the most immune-reactive antigens with HCMV-IgG and HCMV-IgM [5]. Although T-cell reactivity against pp150 seems to form a substantial part of CMV-specific cytotoxic T lymphocyte (CTL) response, with T-cell reactivity is directed towards pp150, unique short (US) proteins[12]. The viral tegument proteins including pp150 elicit powerful and long-lasting antibody responses [15].

On the other hand the rates of the reactivity of IE1 , CM2, p65 and gB2 with HCMV antibodies are convergent and similar were ranged from 38.88% to 71.78% , but still these rates lower than gB1 and p150 antigens ..Tables 2-5 .This finding may due the correlation properties of these antigens, exposures to the human immune system , steps of HCMV replication cycle and contacts of these antigens to host tissues and cells especially IE1 and p65 ,that pp65 mediates the phosphorylation

of viral immediate-early proteins, which blocks their presentation to the major histocompatibility complex class I (MHC I) molecules [84,86]. In addition to the that not all part or sequences of CM2 antigen trigger or stimulate the immune system and mainly humeral immune response. It is known that the central part of pUL57 is a major reactive protein during acute HCMV infection [16,17].

The present study revealed that the levels of serum IFN-γ were increased among the most HCMV seropositive pregnant women with significant relation *(P< 0.05)*..Tables 6, this finding may be due the immune response act to overcome the HCMV infection and its mortality to mother and the fetus. Regarding the relation of serum IFN-γ levels with the specificity of anti-HCMV antibodies to various HCMV antigens, the present study revealed that the increased levels of serum IFN-γ varies with different HCMV antigens so, the highest rate among seropositive for IE1 antigen with significant relation *(P< 0.05)*..Tables 7-8.

This protection is likely through humoral and cell-mediated immune responses with secretion of high IFN-γ. Increase level of IFN-γ is prerequisite for a Th1-dependent protective immune response. There is a significant correlation between IFN-γ level and degree of protection conferred, suggesting that IFN-γ-dependent Th1-predominant immunity is critical for protection against HCMV infection [18-20]. Many studies described the induction of protective Th1-cell mediated immunity against HCMV infection, that the cellular immunity is mediated by both CD4+ and CD8+ cells through cytokine secretion especially IFN-γ [10] so, the non-structural IE-1 protein expressed in the earliest stage of the HCMV replication cycle in infected cells and known to be major targets for T cells [21].

5. Conclusion

The HCMV- antibodies were varies in the specificity for different HCMV antigens. There was significant relation of HCMV antibodies with various HCMV antigens. The highest rate of HCMV-IgG and HCMV-IgM were specific for gB1 and p150 antigens. There was significant relation of the serum IFN-γ level with anti-HCMV antibodies and specificities to various HCMV antigens.

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Measurement of IgE hypersensitivity among people attending the tertiary allergic center in Kirkuk, Iraq

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ABSTRACT

Immunoglobulin E (IgE) is ordered as the least abundant, but in many regards, the most potent, of the enormous antibody classes found in the mammals. IgE mediates the reactions of type 1 hypersensitivity allergic. Generally, IgE plasma levels are very low with 100,000-fold than those of Immunoglobulin G. However, these levels could be obviously increased in specific conditions of allergy, such as bronchopulmonary aspergillosis, or in case of parasitic diseases like schistosomiasis. Additionally, plasma cells of IgE exist in mucosal areas. In particular, it exists in the respiratory tract, where the secreted IgE mediates reactions of allergic.

In this work, the questionnaire was distributed to the study sample, which consisted of both males and females for detecting the numbers of cases of allergy types found at the tertiary allergic center in Kirkuk. The cases were diagnosed by blood tests to determine the amount of IgE in their blood samples. The total number of patients was 40; hence, there were 20 female patients and 20 males. These patients had different types of IgE mediated allergy disease. Most of these types were found in the adult. The results showed that both males and females were equal (each gender scored 20, representing 50% of the total sample). Most of the serum IgE test was negative.

Finaly this study demonstrated the low frequency of allergic diseases in children and young people; however, this was high in old people whose ages ranged between 36 and 50 years. Most of the cases were allergic bronchitis and skin allergy.

Keywords: IgE, Allergy, Allergic bronchitis.

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قياس فرط الحساسية IgE بين الاشخاص الذين يراجعون مركز الحساسية في كركوك – العراق

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الملخص

يتكون مستويات البلازما IgE منخفضة جدا مع مستويات اضعافها في IgG ويزيد في حالات تفاعل الحساسية مثل التهاب قصبات الهوائية التحسسي وحساسية الجلد.

في هذا العمل ، تم توزيع الاستبيان على عينة الدراسة ، التي تتألف من كل من الذكور والإناث للكشف عن أعداد حالات أنواع الحساسية الموجودة في مركز الحساسية الثالث في كركوك. تم تشخيص الحالات عن طريق اختبارات الدم لتحديد كمية IgE في عينات دمهم. كان العدد الإجمالي للمرضى 40. وبالتالي ، كان هناك 20 مريضا و 20 من الذكور. كان هؤلاء المرضى أنواع مختلفة من مرض الحساسية بوساطة IgE. تم العثور على معظم هذه الأنواع في البالغين.

أظهرت النتائج أن كلا من الذكور والإناث متساوون (كل جنس سجل 20 ، يمثل 50 ٪ من العينة الكلية). كان معظم اختبار المصل IgE سالبًا.

في النهاية أظهرت هذه الدراسة انخفاض وتيرة أمراض الحساسية لدى الأطفال والشباب. ومع ذلك ، كان هذا ارتفاعًا في كبار السن الذين تراوحت أعمارهم بين 36 و 50 عامًا. وكانت معظم الحالات التهاب الشعب الهوائية التحسسي والحساسية الجلدية.

الكلمات الدالة: فرط الحساسية , IgE , التهاب قصبات الهوائية التحسسي .

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1. Introduction

Allergen-specific IgE is an integral part of the pathogenesis of allergic diseases. The usefulness of calculating the total serum IgE for diagnosis and treatment is variable. It is significant to realize that total IgE levels rarely provide details about IgE to certain allergens. The IgE presence to a certain allergen does not essentially equate with a clinically meaningful allergic response to that substance. Also, it is important to determine the appropriate symptoms and signs that are developed in the individual upon exposure to the allergen concerned [1]. Allergies, also called diseases of allergy, represent certain conditions resulted from the immune system hypersensitivity to harmless materials in the environment [2].

These disorders include food allergies, atopic dermatitis, hay fever, anaphylaxis and allergic asthma. Symptoms of such diseases may consist of a runny nose, an itchy rash, red eyes, sneezing, breath shortness, or swelling. It is well known that common allergens consist of certain food and pollen [2]. Also, metals and other materials could cause health problems [2]. Severe reactions could result from these common causes, including food, medications and insect stings. The basic mechanism requires IgE antibodies (it represents part of the immune system of the body) and binding to an allergen. After that, a receptor on basophils or mast cells where it causes the release of inflammatory substances like histamine [2].

Typically, diagnosis is performed on the basis of the medical history of individuals or patients [3]. In specific cases, it may be useful to conduct additional testing of blood or skin [3]. However, positive tests may not indicate the presence of a significant allergy to the material concerned [4].

2. Materials and methods

The IgE Rapid Test (Cassette) (serum/plasma) refers to a flow chromatographic immunoassay on the basis of the technique of double antibody sandwich. Based on this test, the anti-IgE antibody is immobilized in the test line region of the strip in the test device. After adding a specimen to the specimen well of the device, it reacts with anti-IgE antibody-coated particles in the test. This mixture moves chromatographically along the test strip length and interacts with the immobilized anti-IgE antibody.

Additionally, there will be a colored line in the region of the test line when the total IgE concentration is at or above the sensitivity level of the test; thus, this indicates a positive result. On the

contrary, if the total IgE concentration is below the sensitivity level of the test, there will not be a colored line in that region; in consequence, this indicates a negative result. For serving as a procedural control, there will always be a colored line in the region of the control line. This indicates that a proper specimen volume is inserted, and membrane wicking has appeared.

Allergies can be confirmed or ruled out using allergy testing. The symptoms incidence and the need for medications can be reduced by correct diagnosis, avoidance advice, and counseling on the basis of the valid results of the allergy test. In addition, improving life quality assesses the existence of allergen-specific IgE antibodies. Two different tests can be utilized: an allergy blood test or a skin prick test. Both tests are recommended due to having the same diagnostic value as well as being cost-effective in comparison to no test, as shown by health economic evidence. The cost can be saved by early and more precise diagnosis. This is because of reduced consultations, referrals to secondary care, misdiagnosis and emergency admissions [5][6].

In blood testing, the concentration of specific IgE antibodies in the blood is measured. Outcomes of quantitative IgE tests increase the probability of classifying the ways whereby different materials may have impact on symptoms. The thumb rule is that if the IgE antibody value is higher, the probability of symptoms will be greater. Nowadays, allergens found at low levels that do not cause symptoms, which in consequence, cannot assistant in anticipating future development of symptoms.

The result of quantitative allergy blood test can be useful in determining substances that cause allergy to a patient, predicting and following the development of disease, estimating the risk of a severe reaction and explaining cross-reactivity [7-9].

3. Results

The tests were applied to 40 patients with different types of allergy. This study consisted of 20 (50%) males and 20 (50%) females with ages ranging between 5-65 years. Most of the patients were over 30 years of age. The majority of cases were allergic bronchitis, found in about 15 (37.5%) cases. While skin allergy was reported in 9 (22.5%) cases. Moreover, there were 7 (17,5%) cases recorded for rhinitis, 2 (5%) cases for each of bronchogenic asthma and contact dermatitis, and only 1 (2.5%) case for each of the laryngobronchitis, urticaria, tonsillitis and asthma. Table 1 illustrates the results according to age groups. The highest age group affected was between age 36 and 50 years, where allergic bronchitis was the most dominant case; whereas the lowest age group was between 5-20 years.

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Table 1: Types of allergy according to age.

Age	Condition										Total	Percentage
	Skin allergy	Allergic bronchitis	Laryngo-bronchitis	Bronchial asthma	Allergic rhinitis	Others	Urticaria	Sinusitis and bronchitis	Tonsillitis	Contact dermatitis		
5-20		2					1			1	4	10
21-35	1	2	1		5						9	22.5
36-50	7	8		2	2	1		1		1	22	55
51-65	1	3							1		5	12.5
Total	9	15	1	2	7	1	1	1	1	2	40	100

Table 2 clarifies the outcomes according to gender. Allergic bronchitis was reported in 10 cases (25%) as the highest percent in males. While in females, allergic bronchitis and allergic rhinitis showed the highest percent (12.5%). Generally, allergic bronchitis is the most frequent in both males and females represented by 37.5%. Table 3 shows the findings in terms of the negativity and positivity of IgE. Skin allergy, allergic rhinitis, and allergic bronchitis were positive; while other conditions revealed negative results (55%).

Table 2: Types of allergy according to gender.

Condition	Male	%	Female	%	Total	%
Skin allergy	6	15	3	7.5	9	22.5
Allergic bronchitis	10	25	5	12.5	15	37.5
Laryngobronchitis			1	2.5	1	2.5
Bronchial asthma			2	5	2	5
Tonsillitis	1	2.5			1	2.5
Urticaria			1	2.5	1	2.5
Allergic rhinitis	2	5	5	12.5	7	17.5
Contact dermatitis			2	5	2	5
Sinusitis and bronchitis	1	2.5			1	2.5
Others			1	2.5	1	2.5

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Total	20	50	20	50	40	100

Table 3: Frequency of allergic tests among different allergic conditions.

Condition	Positive	%	Negative	%	Total	%
Skin allergy	6	15	3	7.5	9	22.5
Allergic bronchitis	9	22.5	6	15	15	37.5
Laryngobronchitis	None		1	2.5	1	2.5
Bronchial asthma	None		2	5	2	5
Tonsillitis	None		1	2.5	1	2.5
Urticaria	None		1	2.5	1	2.5
Allergic rhinitis	3	7.5	4	10	7	17.5
Contact dermatitis	None		2	5	2	5
Sinusitis and bronchitis	None		1	2.5	1	2.5
Others	None		1	2.5	1	2.5
Total	18	45	22	55	40	100

4. Discussion

Diseases of allergy represent conditions resulted from the immune system hypersensitivity, which could be antibodies or cell-mediated. Typically, in most cases, the antibody is responsible for an allergic reaction belonging to the IgE isotype, and the individual is an indication of suffering from an IgE mediated allergic disease. In this study, 20 (50%) male patients and 20 (50%) female patients with ages ranging between 5 and 65 years were enrolled . Most of the cell-mediated patients were over 30 years of age.

The majority of cases were recorded for allergic bronchitis represented by 15 (37.5%), followed by skin allergy with 9 (22.5%) cases, allergic rhinitis with 7 (17.5%) cases, and 2 (5%) cases for each of bronchial asthma and contact dermatitis. The lowest number represented by only 1 (2.5%) case was reported for each of the laryngobronchitis, urticaria, tonsillitis, sinusitis and bronchitis and others. According to this study, most of the cases were found in patients whose ages ranged between 36 and 50 years.

The frequency of IgE negativity was more than the positivity. Concerning gender, female patients were equal to males. After comparing the result with that of [10], we found that IgE is more common in females (the sample size is 3.721, the total numbers of females and males are 2.013 (54.1%) and 1.708 (45.9%), respectively).

In this work, regarding the age group, it was more common in the age group of 36-50 years represented by (55%). By contrast, in the previous study, it was more common in the age group of 40-49 years (total number is 612 represented by 16.4%). This disagreement in the results of age and gender found in this study, and the previous one is due to variability in the sample size of the current study, which was small, as well as seasonal and socioeconomic variations.

Regarding the frequency of allergic tests, both studies were identical in terms of the negativity of serum IgE was more common. This study reported 22 negative cases (55%); while the previous study reported 2.506 negative cases (67.3%) [11][12].

5. Conclusion

This study demonstrated the low frequency of allergic diseases in children and young people; however, this was high in old people whose ages ranged between 36 and 50 years. Most of the cases were allergic bronchitis and skin allergy. Regarding gender, both males and females showed equal results (the total number of each gender was 20 represented by 50%). Most of the serum IgE test was negative.

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[10] Analysis of total immunoglobulin E and specific immunoglobulin E of 3,721 patients with allergic disease MAN-LI CHANG1, CAN CUI2, YAN-HONG LIU1, LI-CHUN PEI3 and BING SHAO4 Departments of 1Laboratory Medicine, 2Endocrinology and Metabolism, and 3Geriatrics,The Second Affiliated Hospital of Harbin Medical University; 4Department of Molecular Epidemiology,Harbin Medical University, Harbin, Heilongjiang 150086, P.R. China. Received February 13, 2015; Accepted March 31, 2015.

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دليل المؤلفين Authors Guide

- يجب أن لا يقدم المؤلف اوراقه إلى مجلات متعددة. وبالمثل.
- لا يجوز للمؤلف تقديم أي ورقة سبق نشرها في أي مكان إلى المجلات للنظر فيها.
- يجب على المؤلف جمع وتفسير بيانات البحث الخاصة به بصدق.
- يحق للناشرين والمحررين والمراجعين والقراء أن يطلبوا من المؤلف تقديم البيانات الأولية الخاصة بأبحاثه لضمان راحة المراجعة والتحرير العام.
- يجب أن يضمن المؤلف أن الأعمال التي قدمها هي أصلية.
- إذا كان المؤلف قد استخدم نصوص الباحثين الآخرين ، فهناك حاجة إلى الاستشهادات المناسبة.
- الانتحال بكل أشكاله يشكل سلوك نشر غير أخلاقي وغير مقبول.
- يجب أن يشير المؤلف صراحةً إلى جميع المصادر التي دعمت البحث.
- يجب على المؤلف إعطاء التقدير الواجب لجميع أولئك الذين ساهموا في البحث.
- أولئك الذين ساهموا بشكل كبير في البحث يجب أن يكونوا مدرجين في قائمة المؤلفين.
- يجب على المؤلف التأكد من أن جميع المؤلفين أكدوا النسخة النهائية للورقة ووافقوا على نشرها النهائي.
- يجب على المؤلف إبلاغ محرّر المجلة على الفور بأي خطأ (أخطاء) واضح في مقالته المنشورة والتعاون بشكل جدي مع المحرر في التراجع أو تصحيح الورقة.
- إذا تم إخطار المحرر من قبل أي طرف آخر غير المؤلف بأن الورقة المنشورة تحتوي على خطأ واضح ، يجب على المؤلف كتابة تراجع أو إجراء التصحيح على أساس وسيلة النشر.
- يوقع المؤلف (تعهد الملكية الفكرية للبحث) و (تعهد نقل حقوق الطبع و التوزيع) و كالاتي:

تعهد الملكية الفكرية

اني الباحث ..... صاحب البحث الموسوم:

.....

اتعهد بان البحث قد انجز من قبلي ولم ينشر في مجلة اخرى في داخل و خارج العراق و ارغب بالنشر في مجلة الكتاب للعلوم الصرفة في جامعة الكتاب.

التوقيع:

التاريخ:

==========

تعهد نقل حقوق الطبع و التوزيع

اني الباحث ..... صاحب البحث الموسوم:

.....

اتعهد بنقل حقوق الطبع و التوزيع و النشر الى مجلة الكتاب للعلوم الصرفة في جامعة الكتاب.

التوقيع:

التاريخ:

سياسة النشر في المجلة Journal publishing policy

- يعمل الناشر، (جامعة الكتاب) وهيئة تحرير مجلة الكتاب للعلوم الصرفة على تقديم محتوى عالي الجودة بأعلى شفافية وأوضح سلوك أخلاقي ممكن. لهذا السبب ، يتم اتباع سلسلة من الإجراءات:
- تتبع مجلة الكتاب للعلوم الصرفة طريقة الوصول المفتوح في نشر المجلات Open Access Journal OAJ . هذا يعني أن الدوريات الخاصة بالمجلة توفر وصولًا فوريًا مفتوحًا للقراء إلى جميع المقالات على موقع الناشر. وبالتالي ، يُسمح للقراء بقراءة النصوص الكاملة أو تنزيلها أو نسخها أو توزيعها أو طباعتها أو البحث عنها أو الارتباط بها أو استخدامها لأي غرض قانوني آخر.
- يتم تمويل عمليات النشر من رسوم النشر التي يدفعها المؤلفون أو مؤسساتهم أو وكالات التمويل.
- بعد اجتياز المقال مرحلة التحقق من الانتحال ، والتحقق من المحرر ، سيتم مراجعة كل بحث من قبل ثلاثة محكمين في مجال الموضوع.
- مراجعة الخبراء هي عنصر حاسم في النشر العلمي ، وأحد الركائز الأساسية للعملية العلمية. وتقدم المراجعة وظيفتين رئيسيتين:

1- ضمان التحقق من البحث بشكل صحيح قبل نشره
2- المراجعة الدقيقة من قبل الخبراء تساعد على صقل النقاط الرئيسية وتصحيح الأخطاء غير المقصودة وتحسين جودة البحث.

دليل المقيمين Reviewers Guide

1. المجلة تتبع المبادئ التوجيهية الأخلاقية الصادرة عن لجنة أخلاقيات النشر (COPE) الخاصة بالتقييم الموضوعي المهني Peer Review.
2. يجب على المقيم الذي يشعر بأنه غير مؤهل لمراجعة المقالة أو لا يمكنه الوفاء بالموعد النهائي لاستكمال المراجعة أن يخطر المحرر فورًا ويعتذر من عملية المراجعة.
3. يجب على المقيم أن يرفض مراجعة أي مقالة تم تأليفها من قِبل شخص يرتبط معه بعلاقة شخصية أو أكاديمية متميزة. يجب على المقيم التعامل مع المقالة بطريقة سرية.
4. يجب عدم الكشف عن المقالة أو مناقشتها مع الآخرين باستثناء ما يصرح به المحرر.
5. يجب أن يتعامل المقيم مع مهمة التقييم بشكل موضوعي.
6. النقد الشخصي للمؤلف غير مقبول.
7. لا يجوز للمقيم استخدام أي جزء من أي بيانات أو عمل مذكورفي المقالة.
8. يجب على المقيم أن يبلغ المحرر على الفور بأي أوجه تشابه بين المقالة قيد المراجعة واية مقالة أخرى منشورة أو قيد الدراسة من قبل مجلة أخرى.
9. يجب على المقيم أن يلفت انتباه المحرر على الفور إلى المقالة اذا كانت تحتوي على مواد مسروقة أو بيانات مزيفة.

7. الملخص: لا يزيد على 250 كلمة على أن يشتمل على الغرض والنتائج والاستنتاجات الاساسية. يجب أن يحتوي أيضًا على قيم المعرفة لموضوع البحث و التركيز على محتوى الموضوع ويتضمن الكلمات الأساسية المستخدمة في جميع أنحاء الصحيفة.

8.الاشكال و الرسوم البيانية: يجب أن يحتوي كل رسم بياني على عنوانه أسفل الرسم التخطيطي بحجم 12. يجب أن يكون الرسم التخطيطي قابلاً للتحرير، التكبير و التصغير.

9. **الجداول**: يجب أن يحتوي الجدول على عنوان بحجم12 اعلى الجدول. يجب أن يكون النص المستخدم داخل الجداول بحجم 12.

10. المراجع: تذكرارقام المراجع المستخدمة في متن البحث بالترتيب داخل قوسين مربّعين [ ]. ترتب المصادر في نهاية البحث بطريقة فانكوفر Vancouver و يجب اتباع الإرشادات التالية:

(أ) إذا كان المرجع عبارة عن كتاب ، فيجب كتابة اسم الباحث الاول متبوعًا بالأسماء الأخرى. ثم عنوان الكتاب (غامق ومائل) بين فارزتين مرفوعتين، ثم الطبعة ، الناشر ، مكان النشر (سنة النشر).

مثال:

[1] P. Ring and P. Schuck, "***The Nuclear Many-Body Problem***", First Edition, Springer-Varlag, New York (1980).

ب) إذا كان المرجع عبارة عن ورقة بحث أو مقال في مجلة: يجب كتابة اسم المؤلف أولاً ، عنوان المقالة (غامق ومائل) بين فارزتين مرفوعتين ، اسم المجلة ، المجلد (العدد) ، الصفحة (السنة).

[2] Ali H. Taqi, R. A. Radhi, and Adil M. Hussein, "***Electroexitation of Low-Lying Particle-Hole RPA States of 16O with WBP Interaction***", Communication Theoretical Physics, 62(6), 839 (2014).

ج) إذا كان البحث عبارة عن رسالة ماجستير أو رسالة دكتوراه ، فيجب كتابة اسم الباحث يليه اللقب ، وعنوان الرسالة (غامق ومائل) بين فارزتين مرفوعتين ، اسم الجامعة ، والبلد (السنة).

[3] R. A. Radhi, "***Calculations of Elastic and Inelastic Electron Scattering in Light Nuclei with Shell-Model Wave Functions***", PhD Thesis, Michigan state University, USA (1983).

د) إذا كان المرجع من مؤتمرفيكتب اسم المؤلف ، **"**عنوان البحث**"** (غامق ومائل) بين فارزتين مرفوعتين ، اسم المؤتمر ، البلد ، جهة النشر ، المجلد ، الصفحة (السنة).

مثال:

[4] Ali H. Taqi and Sarah S. Darwesh, "***Charge-Changing Particle-Hole Excitation of 16N and 16F Nuclei***", 3rdInternational Advances in Applied Physics and Materials Science Congress, Turkey, AIP Conf. Proc., 1569, 27 (2013).

ملاحظة : للمزيد من المعلومات يمكن زيارة موقع الجامعة على الرابط: www.uoalkitab.edu.iq
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قواعد و تعليمات النشر في مجلة الكتاب للعلوم الصرفة

اولا: المتطلبات العامة

1. يتم تقديم البحث الى سكرتارية تحرير المجلة بشكل مباشر باربع نسخ مع قرص مدمج او عبر البريد الاليكتروني للمجلة بصورة ملف (MS-Word) وملف (PDF).
2. تخضع البحوث قبل ارسالها الى المقومين العلميين الى برنامج الاستلال Turnitin
3. تقبل البحوث للنشر بعد تحكيمها من قبل مقيمين علميين و مراجعتها لغويا من قبل الاشراف اللغوي للمجلة باجورتحددها المجلة سنويا او يقدم الباحث شهادة تؤيد مراجعتها لغويا من قبل جهة معروفة وحسب الاصول.
4. تبلغ اجور النشر في المجلة (75000) دينار للباحث من داخل جامعة الكتاب و(125000) دينار للباحثين من خارج الجامعة و(125$) للباحث الاجنبي.

ثانيا: لإعداد البحوث للنشر، على المؤلفين استخدام قالب النشر **Tameplate** المعتمد من قبل المجلة و المنشور على الموقع الالكتروني للمجلة واتباع الإجراءات التالية:

1. المقالة

يجب كتابة المقالة على جانب واحد من الورق A4 : الهامش الأيمن = 2.5 سم ، الهامش الأيسر = 2.5 سم و 2 سم للأعلى والأسفل) مع مسافة 1.5 ويجب ترقيم الصفحات.

2.تنظيم المحتوى:

نوع الخط المستخدم يكون على النحو التالي: الخط "Simplified Arabic" للمقالات العربية ، و "Times New Roman" للمقالات الإنكليزية.

3.حجم الخط:

- العنوان الرئيسي للبحث 18 غامق
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- العناوين الرئيسية 14 غامق.
- العناوين الفرعية 12 غامق.
- الملخص 12.
- النص (متن البحث) 12.

4.الترتيب (تسلسل المحتويات)

يكون ترتيب محتوى البحث كما يلي: عنوان المقالة ، أسماء المؤلفين وعناوينهم ، الملخص باللغة العربية و الإنجليزية (كلاهما مطلوبان ويكون ترتيبهما حسب لغة البحث) ثم متن البحث و المصادر.

5.عنوان ورقة البحث: يجب أن يكون العنوان قصيرًا قدر الإمكان ويشير إلى محتويات الموضوع مع اسم (أسماء) المؤلفين وموقع العمل و البريد الالكتروني لكل باحث. كما ان المؤلف الذي ستتم المراسلات معه تظهر معه اشارة (*) مع إظهار رقم هاتفه.

6. عدد الصفحات: لا تزيد المقالة على أكثر من 15 صفحة من صفحات المجلة ، بما في ذلك المخططات والرسوم البيانية وسيتم تحميل 5000 دينار عراقي (3 دولار) لكل صفحة إضافية.

الإشراف اللغوي

د. عماد رفعت مدحت

السيد وميض محمد الراوي

تصميم الغلاف و مراجعة متطلبات النشر

ا.د. عزيز ابراهيم عبدالله

م.م. بلال توفيق يونس العبادي

بهاء الدين محمد

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مجلة الكتاب للعلوم الصرفة

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رقم الايداع في دار الكتب و الوثائق ببغداد ٢٢٧١ لسنة ٢٠١٧