Prevalence of Burns in Females in Mosul City
نسبة انتشار الحروق عند النساء في مدينة الموصل (2012)

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الخلاصة

الهدف: تهدف الدراسة الوصفية الحالية إلى بيان مدى انتشار الحروق عند النساء في مدينة الموصل لعام (2012).

المنهجية:جُمعت عينة الدراسة من خلال مراجعة النساء المحروقات إلى وحدة الحروق في مستشفى الجمهوري التعليمي. خلال العام (2012) تم تسجيل (244) حالة حرق كان من بينها (115) ذكور و(129) إناث والتي تتراوح أعمارهم مابين (1 – 80) سنة للفترة من (الأول كانون الثاني 2012 إلى 31 كانون الأول2012).تم استخدام الإحصاء الوصفي والاستنتاجي في تحليل البيانات التي جمعت من خلال (النسبة المئوية، الوسط الحسابي، و الانحراف المعياري).

النتائج: أظهرت النتائج إن اكبر نسبة حرق عند افراد العينة(النساء) الذين تتراوح أعمارهن ما بين (21 – 30) سنة حيث كانت نسبتها (34%). السبب الأساسي للحرق هو اللهب وكانت نسبته (53%) أما الماء الحار فنسبته (46%) وأكثر المناطق أصيبت بالحرق هي الوجه والصدر ونسبتها (33% و 23%) على التعاقب أما فترة البقاء في ردهة الحروق كانت أكثر نسبة وقعت في (1 – 5) أيام هي (31%)، أما نسبة وفاة الأطفال من الإناث فقد شكلت (21%).

الاستنتاجات:أظهرتالدراسة أنأقصىحالاتالإصابة بالحروقكانتعندالإناث. وكانمعظمهممنالفئةالعمرية (21–30) سنة. معظمالحروقكانتعند ربات البيوت وضمنالطبقةالاجتماعيةالاقتصاديةالمنخفضة. معظم إصابات الحروق كان سببها اللهب.

التوصيات:أوصت الدراسةبتوجيه برامج تعليمية للمجتمعللوقاية والحد من وقوع إصابات الحروقوإرشادالأسرإلىوضعدلاتلفي أنابيب الغازللحفاظ عليهافي المنزلوذلك لضمانإصلاح فوريعند حدوث أي خطأأو فشلفيأجهزة الطهي.

مفردات البحث : انتشار، أضرار الحروق، النساء.

Abstract

Aim: The aim ofpresent descriptive study resumption to appear extent prevalence of burn in female in Mosul city.

Methodology: The sample was collecting from review the register for burn unit in AL-Jaumhory Teaching Hospital during one year (2012). It registry (244) burn case. Where (115) male, and (129) female with ages ranged between (1 - 80) years old for period from(1st January 2012 to 31st December 2012). Data was analyzedthrough inferential statistical approach were used. This approach is employed through (Percentage, Mean and Standard deviation).

Results: The present study found high burn percentage at patient aged between (21 – 30) year (34%), its percentage were (21-30%. Flame the main causes of burn with percentage (53%), while scald with percentage (46%). Face and chest more than another part of the body were (33% and 23) respectively ,the duration of staying in burn unit (1 – 5) day were (31%). Death of children from the femaleincluding (21%).

Conclusion: The study showed that the maximum incidence of burn injury seen in females. Most of the patient were in the agegroup of (21-30)years. Most burns were domestic, in low socio-economic class and in house – wives.Most of the burn injury caused by flam.

Recommendation: The study recommended guidance to community to preventable, educational programs might to reduce the incidence of burn injury. Guidance to family to put directories of gas service station should be maintain at home so as to ensure immediate repair of any fault in the cooking appliances.

Keywords: Prevalence, Burn Injury, females.

INTRODUCTION

Burn injuries remain a major cause of morbidity and mortality in low and middle-incomecountries. During the past two decades the Iraqi population has being struggling to copewith the impact of wars, sanctions and internal conflicts with poor public services anddeteriorating living standards[(1)].Burns constitute a major role in mortality andmorbidity in the whole world, whetheraccidental, suicidal or homicidal. Burn injuriesare among the most devastating of all injuriesand a major global public health crisis. Burns arethe fourth most common type of traumaworldwide, following traffic accidents, falls, andinterpersonal violence. Approximately (90)percent of burns occur in low to middle incomecountries, regions that generally lack thenecessary infrastructure to reduce the incidenceand severity of burns[(2)].Despite of themmodernization, the domestic fire is the majorcause of the burns with

maximum involvementof females and the accidental injury the maincause.In developed countries like USA, the magnitude of burns injury is (450,000) per year, (3500) deaths per year and (45,000) hospitalizations per year[3]. In a study done in Iran, mortality rate among the hospitalized burn victims was observed to be (25.9%)[4]. In India, approximately, there are (6) million burns cases annually, of which around (0.7) million cases require hospitalization, of which approximately, (0.12) million die annually. Survival rate for burns patients in developing countries like India is around (50%) for burns less than (40%) while those in developed countries it is around (75 – 90%) for (50%) burns. Burn injuries cause significant morbidity and mortality, both in developing and developed countries and have considerable physical, psychological and economic effects on the patients, their families and society[5]. In another study done in Iran, it was concluded that among the domestic injuries, burns are a major public health problem for women of reproductive age[6].The aim of present study resumption to appear extent prevalence of burns in females in Mosul City.

METHODOLOGY:

A descriptive study to assess of all female burns patients presented in the burn Unit, Al Jaumhory Hospital in Mosul City during the period 2012. This study started from (1st January 2012 to 31stDecember 2012). All relative information was collected from patient's treatment files. Inclusion criteria were females of any age with second and third degree burns. Patients were admitted through casualty and detailed history and thorough examination were carried out. Cause and place of burns. Total Body Surface area (TBSA) burnt was calculated using Lund and Browder Chart. The degree of burns was also established.The questionnaire wasdesigned to achieve the aims of study, it was consist two parts, the first content the demographic information(age of female, area of burn, place of burn, seasonal burn happened, material Status, level of education,occupation, socioeconomic status), the second part content the burn characteristicinclude (causes of burn, site of burn injury, duration of stay in burn unit, depth degree of burns, total body surface area and death). Data was analyzed through inferential statistical approach were used.This approach isemployed through (Percentage,Mean and Standard deviation).

RESULT:

Table (1): Distribution of patients according demographic data.

Item		No.	%
Age of female (year) $\bar{x} = 40.5$ SD = 22.94	1 – 10	20	16
	11 – 20	28	22
	21 – 30	44	34
	31 – 40	16	12
	41 – 50	10	8
	51 – 60	4	3
	61 – 70	5	4
	71 – 80	2	1
Area of burn	Rural	78	60
	Urban	51	40
Place of burn	Indoor	80	62
	Outside	49	38
Seasonal burn happened	Winter	40	31
	Spring	34	26
	Autumn	31	24
	Summer	24	19
Material Status	Married	75	58
	Single	54	42
Level of education	Illiteracy	41	32
	Primary school	34	26
	Intermediate school	23	18
	Secondary school	21	16
	Institute or above	10	8
Occupation	Child	30	23

	Student	19	15
	Housewife	72	56
	Employee	8	6
Socioeconomic status	Low	57	44
	Middle	45	35
	High	27	21

Table (1) Shows mean of score age of the patients was (40.5) years with range of (1-80) years. Majority of female patients (53%) sustained burn injury accidentally. Rural patient (60%) and urban(40%). (Table 1) Majority of burnstook place at home (62%) and (38%) outside the home. Majority of admissions (31%) took place in winter while admissions in spring, autumn and summer seasons were (26%), (24%) and (19%) respectively. Marital-status revealed married female (58%) and single (42%). Level of education status revealed illiterate (32%), Primary (26%), Intermediate (18%),Secondary (16%) Institute and above (8%).

While, occupation revealed housewife (56%), (6%) employee, (23%) child, students (15%) and according to Socio-economic status, low (44%), middle (35%) and high (21%) were found.

Table (2): Distribution of patients according to burn characteristics.

Item		No.	%
Causes of burn	Scalding	59	46%
	Electrical	0	0%
	Chemical	2	1%
	Flame	68	53%
Site of burn injury	Face	33	25.5%
	Chest	23	18%
	Abdomen	17	13%
	Back	19	15%
	Upper Limb	20	15.5%
	Lower Limb	17	13%
Duration of stay in burn unit (days) $\bar{x} = 15.5$ SD = 8.80	1 – 5 day	40	31%
	6 – 10 day	33	26%
	11 – 15 day	28	22%
	16 – 20 day	12	9%
	21 – 25 day	10	8%
	25 – 30 day	6	4%
Depth degree of burns	First	0	0%
	First & second degree	10	8%
	Second degree	35	27%
	Second & third degree	47	36%
	Third degree	22	17%
	First & third degree	15	12%
Total body surface area $\bar{x} = 50.10$ SD = 26.34	5 – 15	27	21%
	16 – 25	20	16%
	26 – 35	13	10%
	36 – 45	12	9%
	46 – 55	12	9%
	56 – 65	10	8%
	66 – 75	12	9%
	76 – 75	13	10%
	86 – 95	10	8%
Death		27	21%

Table (2)Shows that flame are the most frequent cause of burn injury (53%), affecting female patients, followed by scalding burns (46%). The burn involved different parts of the body. The face is the commonest site of injury (25.5%), followed by the chest (18%). The

head , neck and upper trunk form the characteristic pattern of caused by hot liquids. Burn buttocks, genitalia and lower limbs (thighs and feet) due to baths. The average duration of stay in burn unit (days) was (15.5) days. The degree of burns found mixed between second and third degree is the commonest depth of injury (36%), followed by second degree (27%). The burn size was (5-15%) total body surface area (21%). Mortality raterevealed(21%) the patient's females.

DISCUSSION:

Burn injuries have been a major cause of concern since pre-historic days to the present era of modern medicine. However, the general beliefthat burns usually occurs at the two extreme ofage, indicating the accidental nature of inflictiondoes not hold true in the present studyset-upwhere the majority of the reported cases belongsto third decade of life.Despite of the modernization, the domestic fire is the major cause of the burns with maximum involvement of females and the accidental injury the main cause[(2)]. In the present study, there is a predominance of female victims (53%) than males (47%) inburns cases and majority of them where were inthe reproductive and productive age groups (21-30 years, 34%)Similarly, in an earlierstudy, Chawla, et al (2010) had observed (64%) casesbelonging to females and (52%) cases were in theage group of 21-30 years[(7)]. These observations areconfirmatory with other studies from variousregions of India[(8)]. This may be due togender difference, socio-cultural factors, anddowry problems. Secondly most of the womenare house wives and they come more in contactwith fire[(9)].Rural patients (60%) outnumbered urbanpatients (40%). The present study findingssimilar to the findings of Haralkar et al (2011), this may be due to standard of living and low socioeconomicstatus. Use of Shagadi, Chulha, andkerosene pressure stove etc. for cooking is moreseen in rural areas than in urban areas. Inpresent study, majority of the cases (44%)were from lower socio-economic and thesefindings are comparable with Haralkar et al[(9)].The present study revealed the kitchen as the major site of the burn incidences in comparison to the outdoor incidences.However, Pegg has reported slightly differentresults in this regard and this mismatch could be due to the difference in the socio economic conditions of variouscountries and difference in the cultures, habits andbehaviors of different populations being studied[(10)].Flame burn was the most common cause of burns accounting for (53%) of the total burns, followed by scald burn seen in (46%) subjects in the present study. This was probably because of faulty and unsafe cooking practices. Similar results were obtained in various studies done in India as well as in other countries [(10,11,12)]. In another study done in Iran, (37.7%) of all women and (32.3%) of women in the reproductive age group were injured by hot liquids [(6)].Maximum average total body surface area (TBSA) of burn (21%) occurred in (21 – 40) yrs age group. In all age groups female exceeded male for total body surface area of burn. The mean total body surface area (TBSA) burnt inour study was comparable with other international studiesby Pegg, (2005) Song, (2003) and Komalafe, (2003)[(10,13,14)]. The datafrom these international studies confirmed the observationthat in the bulk of burn patients, the total body surface area (TBSA) burnt is not morethan (20%).Mean duration of hospital stay for all patients, for patients who died, for those who survived (15.5) days were all similar to a study from Iran [(15)]. As found in other studies the most frequent admissions occurred in winter [(16, 17)] due to greater use of heating devices.

CONCLUSION:

Maximum incidence of burn injury seen in females. Most of the patient were in the age group of (21-30) years. Mostburns were domestic, in low socio-economic class and in house – wives. Most of the burn injury caused by flam.

RECOMMENDATION:

The study recommended guidance to community to preventable, educational programs might to reduce the incidence of burn injury. Guidance to family to put directories of gas service stations should be maintain at home so as to ensure immediate repair of any fault in

the cooking appliances. Education and promoting best practices in fire safety can have a direct impact on preventing burn injuries.

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