Prevalence of Burn in children under (15) years in Mosul City (2009, 2010)

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نسبة انتشار الحروق عند الأطفال الأقل من (15) سنة في مدينة الموصل (2009، 2010)

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الخلاصة

الهدف: تهدف الدراسة الاسترجاعية الحالية إلى بيان مدى انتشار الحروق عند الأطفال الأقل من (15) سنة في مدينة الموصل.

المنهجية: جُمعت عينة الدراسة من خلال مراجعة شاملة لسجلات وحدة الحروق في مستشفى الجمهوري التعليمي. خلال العامين (2009 و 2010) تم تسجيل (580) حالة حرق كان من بينها (163) ذكور و(162) إناث والتي تتراوح أعمارهم مابين (1 – 15) سنة للفترة من 2010/11/1 لغاية 2010/12/15.

النتائج: أظهرت النتائج إن اكبر نسبة حرق كانت عند الأطفال الذين تتراوح أعمارهم ما بين (1 – 5) سنة حيث كانت نسبتها (69%) وعند الذكور أكثر من الإناث حيث كانت النسبة (53%). كان السبب الأساسي للحرق هو الماء الحار والتي كانت نسبته (67%) أما اللهب فنسبته (32%) وكانت أكثر المناطق معرضة للحرق هي الأطراف السفلى ونسبتها (32%) أما فترة البقاء في ردهة الحروق كانت أكثر نسبة وقعت في (1 – 5) أيام هي (59%)، أما نسبة وفاة الأطفال فقد شكلت (10%).

التوصيات: أوصت الدراسة بان التثقيف الصحي في المدارس تعتبر مادة إلزامية ليس فقط فيما يتعلق بالحروق ولكن أيضا فيما يتعلق في الوقاية من أمراض القلب والسرطان والإدمان على المخدرات وما إلى ذلك. وللحصول على النتائج من خلال هذه البرامج يمكن تقيمها على المدى الطويل جدا.كما أن أطباء الأطفال والعائلة لهم مكانة خاصة في التأثير على الأمهات والأسر ومحاولة تحفيزهم. ويمكن إعداد معلومات مكتوبة من خلال منشورات وكتيبات يتم توزيعها على العائلات.

Abstract

Objective: The aim of present study resumption to appear extent prevalence of burn in children under 15 years in Mosul city.

Methodology: The sample were collecting from review the register for burn unit in AL-Jaumhory Teaching Hospital through 2 years (2009, 2010). It registry (580) burn case. Where (163) male, and (162) female with ages ranged between (1 - 15) years old for period from 1/11/2009 to 15/12/2010.

Results: Resulting appearance high burn percentage at patient aged between (1-5) years, its percentage were (69%), while in male is more than female with percentage (53%). Scalding the main causes of burn with percentage (67%), while flame with percentage (32%). Lower limbs more than another part of the body were (32%), while duration of stay in burn unit (1 – 5) day were (59%). Death of children of them (10%).

Recommendation: The study recommended that health education in schools, as a compulsory subject, concerning not only burns but also the prevention of cardiovascular diseases, cancer, drug addiction, etc. Of course, the results of such a programme could only be evaluated in the very long run. pediatric and family doctors have a privileged position to influence mothers and families and try to motivate them. Written information (leaflets booklets) could be prepared and distribution to families.

Key Words: Prevalence, Burn Injury, Children.

Introduction:

Burn injuries experienced by children is a leading cause of emergency department visits and hospitalization[1-3], with the majority of injuries occurring within households[3-8]. Burn injury in young children is often associated with significant physical and psychological long-term consequences[9], as well as long-term medical and nursing treatments[10].Given the relative lack of independence of children 5 years of age or younger, and that most burn injuries occur within the home, it would be expected that burn injuries experienced by this group are preventable[11]. The aim of present study resumption to appear extent prevalence of burn in children under (15) years in Mosul City.

Methodology:

A retrospective design was conducted in Mosul City. Data were collected through a comprehensive review of medical records at the burn Unit. Al Jaumhory Hospital in Mosul City. This study started from November 1th 2010 to December 15th 2010. The data were classified burn according to degree burn and causes. In addition to some demographic characteristic of subject (age, sex, job, residence,……). Data are prepared, organized and entered into a computer file; statistical package for the social science (SPSS, version 15) is used for data analysis.

Result:

One thousand and fifty hundred and ninety clinical chart of patients admitted to our hospital were reviewed. 580 (36.4%) were children under 15 years old.

Table (1): Distribution of sample according to their age, sex, and address.

Item		2009		2010		Total	%
		No.	%	No.	%		
Age (year) X = 8 SD = 4.5	1 – 5	237	73	165	65	402	69
	6 – 10	56	17	55	22	111	19
	11 - 15	32	10	35	13	67	12
Sex	Male	163	51	145	57	308	53
	Female	162	49	110	43	272	47
Address	Home	193	59	158	62	351	61
	Street	132	41	97	38	229	39

Table (1): Shows the average age was (8) years. The male / female ratio (2:1). Most of the accident occurred in an indoor setting home (61%), but the order the child, the more accident at home and the fewer accidents in street (39%), the place of accident is related to the cause.

Table (2): Distribution of sample according to their causes and site of burn injury, duration of stay in burn unit, depth of degree, total body surface area, and death of patient.

Item		2009		2010		Total	%
		No.	%	No.	%		
Causes of burn	Scalding	213	66	178	70	391	67
	Electrical	0	0	0	0	0	0
	Chemical	2	1	2	1	4	1
	Flame	110	33	75	29	185	32
Site of burn injury	Scalp	15	5	0	0	20	3
	Face	55	17	35	14	90	15
	Chest	52	16	24	9	76	13
	Abdomen	46	14	35	14	81	14
	Back	24	7	18	7	42	7
	Upper Limb	34	10	58	23	92	16
	Lower Limb	99	31	85	33	184	32
Duration of stay in burn unit (days) X = 15.5 SD = 8.8	1 – 5 day	191	59	153	60	344	59
	6 – 10 day	78	24	60	24	138	24
	11 – 15 day	28	8	17	7	45	8
	16 – 20 day	12	4	12	4	24	4
	21 – 25 day	10	3	7	3	17	3
	25 – 30 day	6	2	6	2	12	2
Depth degree	First	0	0	0	0	0	0
	First & second degree	20	6	5	2	25	4
	Second degree	117	36	100	39	217	37
	Second & third degree	100	31	98	38	198	34
	Third degree	63	19	45	18	108	19
	First & third degree	25	8	7	3	32	6
Total body surface area X = 50.5 SD = 29	5 – 15	108	33	98	38	206	36
	16 – 25	62	19	54	21	116	20
	26 – 35	39	12	31	12	70	12
	36 – 45	34	11	26	10	60	10
	46 – 55	13	4	6	2	19	3
	56 – 65	20	6	12	5	32	6
	66 – 75	13	4	6	2	19	3
	76 – 75	15	5	7	3	22	4
	86 – 95	21	6	15	7	36	6
Death		27	8	33	13	60	10

Table (2): Shows that scalding are the most frequent cause of thermal injury (67%), affecting infants and toddlers in the kitchen. Flame burns are infrequent in young children but they increase as they grow older. Flame accounted for (32%) of the thermal injuries in children one

years old. Gunpowder is the leading cause of injury, in teenagers (39%)[3]. Table (2) shows the involvement of the different parts of the body. The lower limbs is the commonest site of injury (32%), followed by the upper trunk (16%). 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 length of stay was (15.5) days. The second degree is the commonest depth of injury (37%), followed by second and third degree (34%). The burn size was (5-15%) total body surface area (36%). There were (60) death was (10%).

Discussion:

Although we expected otherwise, our result are surprising similar to other reports. 36.4% of the patients admitted to our hospital with burn injuries during the 2 years period were children under 15 years old. This is consist with the rate given by other authors[1,2,3,4]. Male predominance is the rule and is more significant in older children[5,6]. In our study the ratio male / female abruptly increases from 2:1 in children under 1 years old to 1:3 in the adolescent group. Children under 5 years old are at most risk (69% in our series), especially from birth to 2 years old (35%). This agreement with other studies which was conducted by Cuenca J. et.al (2008)[1], Petridou E. et.al (2005)[3], and Blakeney P. et.al (1998)[9]. Scalding is without any doubt the leading cause of thermal injury[1,2,3,5,6,7,9,10,11]. However, as a result of preventive measures, scalding has been overtaken by other causes in some developed countries[4]. Hot liquid continues to be the main cause of scalds, although there are some geographic differences[10,12,13]. For instance, in our area the main causes of scalds by hot liquid are soups, and water to cook paella or to prepare coffee. Boiling oil from saucepans while cooking is another frequent cause. In Italy accident with water used to prepare tomato sauce are not uncommon[8], and in England the main cause is water from kettles for the making of tea or coffee[9]. An important problem regarding burn in children is the risk of the development of hypertrophic scarring. This was recorded in 25% of our cases. Physical therapy was described for most of these children. In general terms pressure garments seem to be beneficial, but it is quite impossible to ascertain if payments and children follow the treatment properly. As pointed out by Spurr and Shakespeare[14], the therapy is long – lasting, inconvenient and a little expensive. In addition to this, we live in a Mediterranean area, and hot weather makes these garments even more uncomfortable to wear. Finally, we should consider the problem of how to prevent these accidents. First of all, it is useless to try to put the blame on anybody. Accidents in infant and toddlers occur because of natural curiosity of the child who wants to touch and see everything (to explore the outer world) and ignorance of parents and child – minders, who do not think such accident can ever happen to their children. There are two important points: lack of proper education and lack of motivation. Parents, child – minders and children have to be motivated to think that the hazard is possible and that nobody is safe, and they have to be taught how to avoid these accidents. There are no uniform result regarding preventive programmes carried out in other countries. Many programmes have failed to reduce the incidence of burns[9,13], whereas others have been successful[2,4]. Failure is probably due to the difficulties of changing habits and lifestyle[12] and the actual planning of the prevention campaign. Everybody agrees on the target population and how to educate it through kindergartens, schools, talks, and messages by the mass media[2,9,15,16], and also by re – education of family doctors and medical students[12]. If we examine failed prevention programmes it seems clear that short – lasting, sporadic and inconsistent campaigns are condemned to fail. The only way achieve good results would appear to be a long – lasting (maybe permanent), continuous and well – planned campaign. The study

recommended that health education in schools, as a compulsory subject, concerning not only burns but also the prevention of cardiovascular diseases, cancer, drug addiction, etc. Of course, the results of such a programme could only be evaluated in the very long run. pediatric and family doctors have a privileged position to influence mothers and families and try to motivate them. Written information (leaflets booklets) could be prepared and distribution to families.

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