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Characteristics of Burns Patients in Babylon Province a Survey Study (2014-2016)

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Abstract: Civilian burns in Babylon is wide spread, increasing infrequency and related to financial domestic hardship. The current statistical study aims to highlight the extent of burnsamong adult patients in Babylon province. Methodology: The sample was collected through a comprehensive review of burn unit records at AlJaumhory Teaching Hospital which represents all burn cases in Hella city during the years of (2014-2016). It recorded (325) burn case (163) were male, and (162) were female their ages ranged between (15 - 25) years old in the period from 2014 to 2015, while (255) case recorded from 2015-2016, the total for two years were (580).
Results: Result indicated a high percent in burn patients aged (15-20) years old, this represent (69%), where the percentage of male were more than females by(54%). Scalding is the main cause of burn by a percentage of (67%), as for flame burns by percentage of (32%). Lower extremities represented (32%) and they were the most affected area of the body, while length of stay in burn unit were about (5 – 25) days which represented (55%) of the study sample.
The highest percentage for the cause of death which resulted from electric burns, were (195) between the age group (15-25) during the years 2015, 2016.
Recommendation: A health education in home by media concerning burn were one of the recommendations of this study. In fact, such programme can be evaluated on the long run. A privileged positive position offered by family and doctors have been influence on mothers and families and try to motivate them. (Brochures) should be distributed to families.

Key Words: Burns, adult patients, Babylon Province survey.

INTRODUCTION

“A burn is defined as an injury to the skin or other organic tissue caused by thermal trauma, it occurs when some or all of the cells in the skin or other tissues are destroyed by hot liquids (scalds), hot solids (contact burns), or flames (flame burns)”(1).Burns also considered as an injuries to the skin or other tissue due to radiation, radioactivity, electricity, friction or contact with chemicals.

Burns may be discrete and categorized as thermal burns, inhalational burns, first degree or superficial burns, second degree or partial-thickness burns, third-degree or full thickness burns. Chemical burns electrical burns, radiation burns all of these types of burns play a major role in the care and cure for the adult patients. (2).

Furthermore burns can cause swelling, blistering, scarring and, in serious cases, shock and even death. It also can lead to infections because they damage the skin's protective barrier. Treatment for burns depends on the reasons of the burn,profundity, and how much of the body it covers

“According to the WHO global burden of disease estimates for 2004, just over 3, 10,000 people died as a result of fire-related burns, of which 30% were under the age of 20 years”.(3).

Burn injuries in adult patients are often associated with significant physical and psychological long-term consequences (4), as well as long-term medical and nursing treatments (5). "Home is the most suitable place that burn injuries occur in it, it would be predictable that burn injuries experienced by this group are preventable"(6). The researcher aimed tomeasure the prevalence of burn in adult patient’s in Babel province.

Generally thehighest risk for death from burns occurs in youth, with a global rate of 3.9 deaths per 1, 00,000 populations. In all over the world, females have the highest death rates from burns (7). Burn injuries experienced by youth is a leading cause of emergency department visits and hospitalization (7), with the majority of injuries occurring within households (8).

METHODOLOGY

This study analysed the propagation of burn patients in Babylon province. The design used in this study was a (retrospective design), it was conducted in Babylon province. To acquire data, the researcher collected it through a comprehensive review of medical records at the burn unit in Al Jaumhory Hospital. This study established from3th of Feb 2014 to end of Feb2016. The data classified burn according to degree burn and causes. In addition to some demographic characteristic of subject (age, sex, address …) Data are prepared, organized and entered into a computer file; statistical package for the social science (SPSS, version 20) is used for data analysis.

Table (1): Sociodemographic data of the study populations

Items		2014		2016		Total	%
		NO	%	NO	%		
Age (year)	15-20	240	74	165	65	405	69
	21-25	85	26	90	35	175	31
Total		**325**	**100**	**255**	**100**	**580**	**100**
Sex	Male	163	51	145	57	308	54
	Female	162	49	110	43	272	46
Total		**325**	**100**	**255**	**100**	**580**	**100**
Address	Home	193	59	158	62	351	61
	Outside	132	41	97	38	229	39
Total		**325**	**100**	**255**	**100**	**580**	**100**
Employment status	Student	162	49	97	38	259	44
	Housewife	163	51	158	62	321	56
Total		**325**	**100**	**255**	**100**	**580**	**100**
Education level	Primary education	162	49	90	35	252	43
	Secondary education	163	51	165	65	328	57
Total		**325**	**100**	**255**	**100**	**580**	**100**

Table (2) Distribution of burns patients in accordance with characteristics of burn between the 2014-2016 years

Items		2015		2016		Total	%
		No.	%	No.	%		
Cause of burn	Scalding	213	66	178	70	391	*67
	Chemical	2	1	2	1	4	1
	Flame	110	33	75	29	185	32
Anatomical location of burn injury	Scalp	15	5	0	0	20	3
	Head ,Face , Neck	55	17	35	14	81	14
	Chest	52	16	24	9	76	13
	Abdomen	46	14	35	14	81	14
	Back	24	7	18	7	42	7
	Upper extremities	34	10	58	23	92	16
	Lower extremities	99	31	85	33	148	*32
Length of stay in burn unit (days) SD=8.8	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	197	60	159	62	356	*61
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 (TBSA) SD=29	5 – 25	170	52	152	59	322	*55
	26 –45	93	28	57	22	150	25
	46 – 65	33	10	18	7	51	8
	66 – 85	28	8	13	5	41	7
	86 – 95	21	6	15	7	36	6

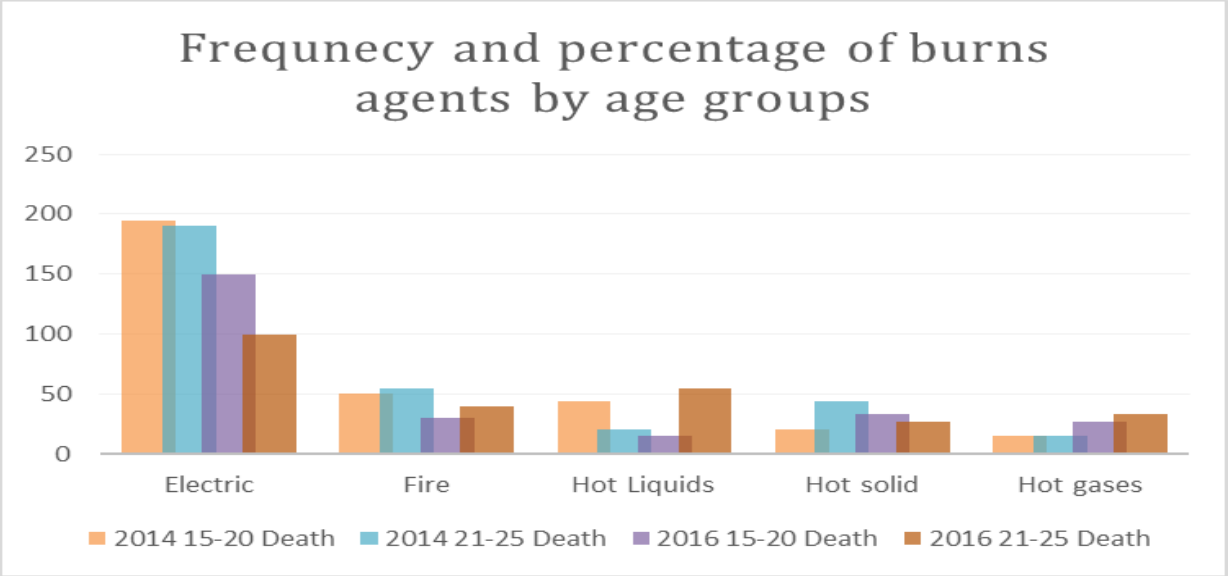

Figure (1) Frequency & percentage of burns agents by age groups

DISCUSSION

Burns are common among classifications of injuries in Babylon province, it isa social crowded area with a high incidence of different types of burns. (9).The researcher aimed to survey epidemiological features of burns in this province to determine associated factors and acquire data for developing a strategy to prevent burns. In this study around 2014- 2016, 69% of adult patient who were admitted to our hospital with burn accident were adult patients between the age group of (15-25).Similar results were found in studies from Iran (10), Egypt (11), and Turkey (12). The incidence is higher than those reported in Hemeda (29.3%) (11) and (35%) Sakallioglu AE, (12). Our study coincided with other studies which was conducted by (10), (11), and (12).

Male / female ratio abruptly increases from 1.13:1 in adult patients 15-25 years. A similar results was observed in Mabrouk A, Maher A, Nasser, (2003) (13). This agreement with other studies which was conducted by Stewart BT, et al.,Chen SH, Chen YC, Chen TJ, Ma H., Peck M, Pressman MA.(14,15,16).

There is no doubt that scalding is the leading cause of thermal injury(4,6,8,11,13,15,16,17,18,19). “However, as a result of preventive measures, scalding has been overtaken by other causes in some developed countries” (20).

“Hot liquid continues to be the main cause of scalds,” (21) although there are some cultures differences (22). “For instance, in our region the main causes of scalds by hot liquid are, boiling rice water and water to cook peas or to prepare tea. Boiling oil from saucepans andcooking itselfis another frequent cause. In England the main cause is water from kettles for making tea or coffee” (22). An important problem regarding burns in adult patients is hypertrophic scarring. This was recorded in 25% of our cases.

In general terms pressure clothes seem to be beneficial, but it is quite impossible to ascertain if payments and youth follow the treatment properly. Moreover, we live in an area, withhot weather makes these dress even more uncomfortable to wear.Oure study identifies that electrical agent recorded higher percentage of death with age group (15-20), in my opinion these results coming true with youth day activates and neglecting in treatment in our hospital. These records were in line withColombia experience,” the higher frequency of electrical accidents is by accidental contact with power lines that pass very close to the houses, and they occurred usually, during local housing arrangement; in a few other cases, it is due to illegal manipulation of electrical lines to obtain wires and then sell the copper.”

Finally, we should look to solve these problems and accidents. Youth accidents occur because of natural curiosity of the person who wants to explore the outer world and ignorance of families, who do not think such accident can ever happen to their teenage children.

Everybody agrees that burns are not just a medical problem, but both the patient and the family face physical and psychological problems that go beyond the period of hospitalization. (23)

Therefore, the absent of proper education and lack of motivation. Parents and youth have to be motivated to think that the random is possible and that nobody is safe, and they have to be taught how to avoid these accidents. No unified results regarding preventive programs achieved in other countries.

“Further research and resources should be allocated to care and preventive measures of electrical burns”, (24) and many programs had to be implemented to reduce the incidence of burns (25).

CONCLUSION

The primary endpoint of this nationwide study which recorded (1590) patients, where (580) cases showed that burn injuries are common, with an overall burn injury prevalence rate of (36.4%). Adult patients aged (15-25) suffered most frequently whereas the sites of injuries were more often on the lower extremities. In addition to that males suffered from burn injuries more than females.

Although(67%) of the scalds were caused by hot liquid,and (32%) by flame of cases. Most of the burn accidents occurred in the home environment.

RECOMMENDATION

The study recommended based on the results that health education programs in schools is considered a compulsory subject in relation to burns. Certainly results through those programs could not be evaluated on the long run. In addition implementation on multidisciplinary interventions for risk mitigation by nurses, primarily on the basic knowledge regarding first aid and resuscitation.

Moreover written information can be prepared through leaflets and pamphlets and could be distributed to families.

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