Assessment of Nurses' Knowledge toward Nursing Intervention for Eye Trauma at Baghdad Teaching Hospitals

Ahmed F. Hassan[1], Tahseen R. Mohamed[2], Aqeel H. Jassim[2]

[1]Assistant Instructor, [2]Teacher, Fundamentals of Nursing Department, College of Nursing-University of Baghdad

Abstract: Nurses in emergency care for eye trauma usually concentrate on life threatening issues which are emergency in most situations that lead to little concern of the less emergency issues like eye problems even it is serious problem. **Objectives**: Assessment of Nurses' Knowledge toward Nursing Intervention for Eye Trauma and to find out a relationship between nurses knowledge with some variables such as (educational level, year of experience in hospital, training course).**Methodology**: A descriptive study was conducted in the period of December 10th 2017 up to the end of 5th May 2018. The sample consisted of (100) nurses who were systematically selected one by one. The data collected was analyzed using SPSS version 17.0. **Results:** The majority of the study were female who accounted for (59%) of the total participants while male constituted (41%). Most of the study participants (32%) were ages over 41 years old. (43%) of the nurses were Nursing high school graduate. Seventy eight percent of the nurses were married and fourth eight percent were barely sufficient. Majority (83%) of nurses had training course**. Conclusions**: Findings of study demonstrate that, nurses have good knowledge about eyes Trauma.

Keywords: *Knowledge, intervention, nurses, Eye Injuries*

Introduction

Eye injuries come at a high cost to society and can be avoided. Primary explosion injuries can be initial, from the same explosion wave secondary from the wind-blown fragments. Post-secondary; due to structural collapse or thrown against a fixed body; or the quartet, burns and injuries of indirect [1]. Chemical eye injuries are common and represent one of the "true" eye emergencies. Virtually any chemical can cause ocular irritation. Most of these injuries are unpredictable and do not cause permanent lesions (e.g., shampoos, defense sprays, home cleaning solutions, etc.) while others may result in permanent decay [2]. Eye trauma is the main cause of impaired vision and affects the individual by influencing their quality of life and society by causing loss of ability to work [3]. Penetrating orbital injuries pose a serious threat to vision, eye movement, and life in some cases. Previous studies have shown that risk and type of infection are often associated with age, sex and race [4]. Management of an injured eye requires taking accurate history, evaluation of vision that measures the acuity and if there is a relative glaucoma defect as well as careful examination of the eyes, under an aesthetic if necessary. A lateral canthotomy with cantholysis should be performed immediately if there is a sight-threatening retro bulbar haemorrhage. Systemic antibiotics should be prescribed if there is suspected penetration or perforation of injury. The world should be protected by ruptured eye shield [5].

Materials and Method

A descriptive study: Assessment of Nurses' Knowledge toward Nursing Intervention for Eye Trauma at Baghdad Teaching Hospitals. This study was conducted at Baghdad Teaching Hospitals between December 10th 2017 up to the end of 5th May 2018. A tool of knowledge questionnaire was developed and distributed to the participants in this study. The sample consisted of (100) nurses at Baghdad Teaching Hospital, Ibn-AL-Hathaim Teaching Hospital, AL.Yarmouk Teaching Hospital,. Imamein Kadhimein Medical City. A questionnaire- interview format was designed and developed by the researcher for the purpose of the study; such development was employed through the available literature, clinical background and interview with nurses. All the items were measured on scale of (2) indicates that the know 1; don't know 0.The questionnaire consisted of (2) parts. Part I: Demographic Information Sheet. Part II: Assessment of Nurses knowledge toward Nursing Intervention for Eye Trauma which Includes:

foreign body, chemical substance and embedded object. Rating scale was used to rate the frequency and extension of the problems. The content validity of the instrument was established through a panel of (10) experts. Test- retest reliability was determined through a computation of person correlations for the scales. The data were collected by using the questionnaire structured format through interview and inspection technique. The determination was conducted during the period from 1st January 2018 to 30th February 2018.The data were analyzed through descriptive data analysis and inferential data analysis the data were analyzed through the use of Statistical Package of Social Sciences (SPSS) version (17).

Results

Table (1): The Mean of Score Nurses knowledge toward Eye Trauma Items.

No	Items	Know	Don't know	SD	MS	A.D
A	Foreign body					
1	To Attempt to flush and foreign objects from the eye whilst keeping the injures eye down	22	78	.416	.22	poor
2	keep the person still and comfortable	98	2	.141	.98	Good
3	Place a sterile pad over the eye.	96	4	.197	.96	Good
4	Avoid putting any pressure on the eye	92	8	.273	.92	Good
5	Encourage the injured person not to blink or move either eye as movement of the unaffected eye will also cause movement of the injured eye	76	24	.429	.76	Good
6	If possible the victim should keep the uninjured eye closed or covered	70	30	.461	.70	Good
7	Seek medical advice	94	6	.239	.94	Good
8	Do not place any objects	94	6	.239	.94	Good
	Total	642	158	.299	.80	Good
B	Chemical substances					
1	Immediate copious irrigation with a minimum of 1-2 L of normal saline	84	16	.368	.84	Good
2	Instill a topical anesthetic	68	32	.469	.68	Good
3	Use eyelid retractor	76	24	.429	.76	Good
4	Double eversion of the eyelids	64	36	.482	.64	Good
5	No corneal involvement -ATB + steroid eye drop	68	32	.469	.68	Good
6	Going to ophthalmologist	94	6	.239	.94	Good
7	Preservative-free artificial tears	60	40	.492	.60	Good
8	Instill topical cycloplegic and topical antibiot	58	42	.496	.58	Good
9	Taking oral analgesic	78	22	.416	.78	Good
10	Pressure patch or bandage on the contact lens	46	52	.502	.48	Poor
11	Use the Anatiglaucoma	28	72	.451	.28	Poor
	Total	640	358	.404	.58	Good
C	Embedded object					
1	Do not try to remove the object from the eye	90	10	.301	.90	Good
2	Try to place a protective cover around and over the injured eye without pressure	86	14	.349	.86	Good
3	Ensure that the pressure on the protective cover of the infected eye	88	12	.327	.88	Good
4	Place a pad over the uninjured eye to minimize the movement in both eyes	32	68	.469	.32	Poor
5	Stop examination	68	32	.469	.68	Good
6	Give tetanus prophylaxis	56	44	.499	.56	Good
7	Not taking antibiotics by mouth	50	50	.503	.50	Good
8	Refer immediately to ophthalmologist	90	10	.302	.90	Good
	Total	560	240	.402	.70	Good

A.D.): Assessment Degree, M.s=mean of score [(0 - .49) = poor (F); (0.5 – 1)= good(P)]

This table shows the total nurses ' knowledge toward nursing intervention for eye trauma, which indicated that nurses had good knowledge toward for eye trauma, with respect to the total mean of score (MS) which was (.80) for foreign body domain, MS (.58) for chemical substances domain and MS (.70) for embedded object.

Table (2): Association between (Level of Education, Experience of nursing in Hospitals, Training Course) and Nurses Knowledge.

Nurses knowledge Level of education	**Poor**	**Good**	**Total**	**χ2-obs.**	**Sig.**
Nursing high school graduate	4	39	43	3.550a	NS
Institute graduate	2	36	38		
College of Nursing	4	15	19		
Total	10	90	100		
χ2criti.=5.99 df=2 p ≤ 0.05					
Nurses knowledge Experience of nursing	Poor	Good	Total	χ2-obs.	Sig.
1-5	6	21	27	7.223a	NS
6-10	0	22	22		
11-15	2	21	23		
>16	2	26	28		
Total	10	90	100		
χ2criti.=7.815 df=3 p ≤ 0.05					
Nurses knowledge Training course	Poor	Good	Total	χ2-obs.	Sig.
Yes	4	79	83	14.560a	H.S
No	6	11	17		
Total	10	90	100		
χ2criti.= 3.841 df=1 p ≤ 0.05					

***: P ≤ 0.05; **: P ≤ 0.01,** χ^2,t-test

This table indicates that there is no significant association between levels of education, experience of nursing in hospitals with nurse's knowledge and there is significant association between training courses with nurse's knowledge.

Discussion

Through the course of the data analysis of the present study the finding showed that the majority (59%) of the study were female while the remaining were male. The highest percentage of age group in present study (43%) were over 41 years old and lowest percentage(8%) were (21- 25) years old .Concerning marital status and level of education, (78%) of the sample were married, most of them are (43%) nursing had high school graduate. monthly income for study sample were (48%) o barely sufficient income.

These results are agreement with the findings obtained from other study, who shows that nurses in age group of 41–60 had good knowledge (11.1%) compared to age group of 20–30 (1.1%).also this study disagree with level of education ,who shows nurses with certificates have good knowledge (25%)compared to post basic nursing (0%) [6].

Regarding experience years, majority (28%) of the study was experience years in nursing and (37%) of nurses had Experience years in eyes hospitals, (83%) have training and (55%) had number of courses in nursing.

These results are accordance with findings obtained from other study, shows that after the training course, 47.5% of the respondents were somehow familiar with high reliability organizations model (HROs), and 52.5% admitted that they were completely familiar with this model, although, only 18.8% proved completely familiar with HROs model before the training course [7].

The result of accurate study that show foreign body domain in table (2) for nurses knowledge is high good knowledge in item (keep the person still and comfortable) and poor knowledge in item (To Attempt to flush and foreign objects from the eye whilst keeping the injures eye down).The mean of score is good at all Foreign body domains. A finding suggest the large injured of patients to enter foreign body to the eye hospital in the eyes that leads to frequent nurses cope with these injuries and to increase knowledge about these eye trauma .

The findings of the study agree with result obtained from other study who reported that The most common FBs causing an injury were metal fragments (37.6%, n=179) and dust (31.1%, n=148). The majority of the patients (72.1%, n=369) had sustained work-related injuries. Some patients had chemical exposure [8].

The result of accurate study that show of Chemical substances domain in table (2) for nurses knowledge are high good knowledge in item (Going to ophthalmologist) and poor in items (Pressure patch or bandage on the contact lens) and(Use the Anatiglaucoma).The mean of score is good at all Foreign body domains. A result that refers to frequent patients enter the chemical injury to the eye hospital in the eyes of leads to frequent nurses to deal with chemical injuries and to increase knowledge and skills about these truma.

This finding was similar to a study conducted by other researcher who stated that study which reported that the chemical injuries were accidental in 73.9% of the cases and of these 76.5% were work related. The remaining 26.1% resulting from assault were bilateral and led to blindness in all the patients. Main injurious agents were acid and alkali [9].

The finding demonstrated the mean of score of embedded object in table (2) for nurses knowledge are high good knowledge in item (Do not try to remove the object from the eye) and (Refer immediately to ophthalmologist) and poor in item (Place a pad over the uninjured eye to minimize the movement in both eyes). The mean of score is good at all embedded object domains. This finding indicted nurses have good knowledge to deal with the Embedded object of eyes in hospitals.

This finding are good agreement done which other researchers who reported that successful removal of penetrating oculo-cranial foreign body by non-operative methods can be done in the emergency department in carefully selected patients [10].

Level of education ,experience of nursing in hospitals in comparison of the respondent's total Nurses knowledge domain in table (4) ,there is non-significant association between level of education (χ^2 obs=3.550[a]) , experience of nursing in hospitals(χ^2-obs=7.223[a]) with nurses knowledge domains.

This result of study are disagreements with other studies done by other researchers whose reported that the association between knowledge and education level there was statistically significant (significant level is value less than 0.05) association between the two variables(χ^2-obs== 8.003 [a], df=1 , $p \leq 0.05$) [11].

Training course in comparison of the respondent's total nurses knowledge domains with training course in

table (4) ,there is significant between training course((χ^2 obs=14.560[a], df=2, $p \leq 0.05$) with nurses knowledge domains.

These result were similar to those result obtained from other researcher who reported that total knowledge of staff about high reliability organizations model increased after training course (P<0.0001) [7].

Conclusions

This study demonstrate that, despite good nurses knowledge regarding eyes trauma , as well as study indicated overall nurses have positive correlation eyes trauma and training course.

Recommendations

1. Health education programs for nurses about eyes trauma.

2. Increases training course for nurses inside and outside in Iraq that contributed to improve nurses knowledge and practice about eyes trauma.

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References

1- Scott R. The injured eye. *Philos Trans R Soc Lond B Biol Sci*. 2011;366(1562):251–260. doi:10.1098/rstb.2010.0234**.**

2- util es el Consentimiendo C. Medical-legal.

3. Akdur O, Özkan S, Erkılıç K, Durukan P, Duman A, İkizceli İ. Acil servise göz travması nedeniyle başvuran olguların değerlendirilmesi. Akademik Acil Tıp Dergisi. 2009;8:47-50.

4- Malla G, Bhandari R, Gupta PP, Giri R. Penetrating orbit injury: challenge to emergency medicine. BMC research notes. 2013 Dec;6(1):493.

5- Blanch RJ, Bindra MS, Jacks AS, Scott RA. Ophthalmic injuries in British armed forces in Iraq and Afghanistan. Eye. 2011 Feb;25(2):218.

6- Singh B, Chong MC, Zakaria MI, Cheng ST, Tang LY, Azahar NH. Assessing nurses knowledge of Glasgow Coma Scale in emergency and outpatient department. Nursing research and practice. 2016;2016.

7- Mousavi SM, Jabbarvand M, Zeraati H, Dargahi H, Assadollahi A, Mousavi SA. Training courses and staff knowledge for implementation of high reliability organizations model in Farabi eye hospital, Tehran, Iran. Iranian Red Crescent Medical Journal. 2016 Dec 1;18(12).

8. Yiğit Ö, Yürüktümen A, Arslan S. Foreign body traumas of the eye managed in an emergency department of a single-institution.

9. Adepoju FG, Adeboye A, Adigun IA. Chemical eye injuries: presentation and management difficulties. Annals of African medicine. 2007 Mar 1;6(1):7.

10. Malla G, Bhandari R, Gupta PP, Giri R. Penetrating orbit injury: challenge to emergency medicine. BMC research notes. 2013 Dec;6(1):493.

11. Singh B, Chong MC, Zakaria MI, Cheng ST, Tang LY, Azahar NH. Assessing nurses knowledge of Glasgow Coma Scale in emergency and outpatient department. Nursing research and practice. 2016;2016.