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Family violence: A cause of sight threatening eye injuries in Ibadan, Southwest Nigeria.

OA Ogun

Department of Ophthalmology, College of Medicine, University of Ibadan, Nigeria

Abstract

Background: Eye injuries cause significant ocular morbidity in general ophthalmic practice, and reports, suggest that majority of these injuries occur at home. Eye injuries within the home may result from accidental and non-accidental injury. While accidental ocular trauma is well recognized and often promptly reported, non-accidental ocular trauma may be harder to identify. Non-accidental domestic eye injuries often result from interpersonal violence within the home; otherwise known as "*family* violence". Corporal punishment, a common practice in the African setting, accounts for a significant number of non-accidental domestic eye injuries.

Aim: This article seeks to draw attention to interpersonal violence within the home, as an important cause of avoidable ocular injuries and to sensitize physicians, to the need for multidisciplinary management and social intervention.

Methods: This was a five-year review of eye injuries that occurred at home. Cases resulting from non-accidental injury inflicted by a relative or family member were included. Demographic data regarding the injured cases, and their assailants, was collected. Ocular presentation, presenting visual acuities, and final visual outcomes were analyzed.

Results: One hundred thirty-eight eye injuries were reviewed. Of these, 57.2% (79/ 138) occurred at home. Interpersonal violence, accounted for 16 out of the 79 domestic eye injuries, comprising 5 males and 11 females. Nearly half (7/16) of the injuries, resulted from corporal punishment. Patients were aged 10-45 years (mean 23.8 years). Patients presented, on average, 5.5 days post-injury. Visual outcome was generally poor.

Conclusion: Spousal and child abuse are under-recognized causes of eye injuries in the home.

Keywords: *Violence, Home, Eye injuries, avoidable blindness, corporal punishment, child abuse*

Résumé

Contexte: Les lésions oculaires causent une morbidité oculaire importante dans la pratique ophtalmologique générale, et les rapports suggèrent que la majorité de ces blessures se produisent à la maison. Les lésions oculaires dans la maison peuvent résulter de blessures accidentelles et non accidentelles. Tandis que le traumatisme oculaire accidentel est bien reconnu et souvent signalé rapidement, le traumatisme oculaire non accidentel peut être plus difficile à identifier. Les lésions oculaires domestiques non accidentelles résultent souvent de la violence interpersonnelle à l'intérieur du foyer; autrement connu sous le nom de "violence familiale". Le châtiment corporel, une pratique courante dans le milieu africain, représente un nombre important de blessures oculaires domestiques non accidentelles.

Objectif: Cet article cherche à attirer l'attention sur la violence interpersonnelle au foyer, comme une cause importante de blessures oculaires évitables et pour sensibiliser les médecins, à la nécessité d'une gestion multidisciplinaire et d'une intervention sociale.

Méthodes: Il s'agissait d'un examen quinquennal de lésions oculaires survenues à la maison. Les cas résultant d'une blessure non accidentelle infligée par un parent ou un membre de la famille ont été inclus. Les données démographiques concernant les cas blessés et leurs agresseurs ont été recueillies. La présentation oculaire, la présentation de l'acuité visuelle et les résultats visuels finaux ont été analysés.

Résultats: Cent trente-huit blessures des yeux ont été examinées. Parmi ceux-ci, 57,2% (79/138) se sont produits à la maison. La violence interpersonnelle représentait 16 des 79 blessés dentaires domestiques, dont 5 hommes et 11 femmes. Près de la moitié (7/16) des blessures ont résulté de châtiments corporels. Les patients étaient âgés de 10 à 45 ans (moyenne de 23,8 ans). Les patients ont présenté, en moyenne, 5,5 jours après la blessure. Le résultat visuel était généralement médiocre.

Conclusion: La violence faite au conjoint et aux enfants sont des causes insuffisamment reconnues des lésions oculaires dans la maison.

Mots-clés: *Violence, Maison, Lésions oculaires, aveuglement évitable, châtiment corporel, maltraitance des enfants*

Correspondence: Dr. Olufunmilola A. Ogun, Department of Ophathmology, College of Medicine, University of Ibadan, Ibadan, Nigeria. Email: Olufunmiogun@gmail.com

Introduction

Eye injuries are a significant cause of ocular morbidity in general ophthalmic practice and reports suggest that majority of these injuries occur at home [1]. Eye injuries within the home may result from accidental and non-accidental injury [1,2]. While accidental ocular trauma is well recognized and often promptly reported, non-accidental ocular trauma may be harder to identify. Non-accidental domestic eye injuries may result from interpersonal violence within the home; otherwise known as "*family* violence or *domestic violence*". Family violence (FV), is a broad term, encompassing "*intimate partner* or *spousal violence*", "*gender violence*", "*violence against women*" as well as "*physical violence against children*" otherwise known as "*child abuse*"[3]. While on the other hand, domestic violence (DV), conventionally, is used as a more restrictive term limited to *spousal* or *intimate partner violence* [3-7]. Notwithstanding, less recognized or emphasized forms of violence within the home do exist and indeed, may be responsible for significant ocular morbidity and avoidable blindness. Family violence (FV) refers to acts of violence between family members or intimate relations including elders, children and caretakers [3]. The term family violence is sometimes used interchangeably with domestic violence (DV); which is defined as the use of physical or non- physical means to control or maintain family members or persons living in an intimate relationship within a household in an abusive or coercive relationship for the benefit of the abuser [3]. Family violence is a broad term encompassing ***any*** form of interpersonal violence that occurs between members of a household; irrespective of the relationship [3, 4]. Naturally, the concept of FV is abhorred among many cultures however, it remains highly prevalent in some societies, and is even tolerated by others; existing in different forms of traditionally acceptable cultural practices, such as wife-beating, child-beating (corporal punishment) and verbal abuse, perpetrated in the course of enforcing discipline within the home [5-9]. There is significant under-reporting of all forms of FV because of the associated stigma and fear of reprisal, reproach or rebuff [7, 10]. The impact of FV is therefore significantly underestimated.

The objective of this study, therefore, was to investigate the impact of interpersonal violence as a cause of non-accidental eye trauma within the home. This article seeks to draw attention to the different forms of interpersonal violence within the home, as an important cause of avoidable ocular injuries presenting to the emergency ophthalmology department and to sensitize physicians, to the need to establish a standard operating procedure (protocol) for the multidisciplinary management of non-accidental eye injuries resulting from violence within the home. This protocol should address not only the management of the ophthalmic injury, but also seek to identify and address sociocultural factors that predisposed to it.

Materials and methods

All eye emergency case records in the Department of Ophthalmology, University College Hospital, Ibadan, from 31st July 2006 to 30th September 2011 were retrospectively reviewed for documentation of ocular injuries, which occurred, as a result of violence within the home. Data extracted from clinical records included: age, sex, occupation, home address, nature of home location (whether urban or rural), level of education, details of assailant, circumstances of the eye injury, patient's relationship to the assailant and the nature of any objects involved. Examination findings were reviewed and injuries were classified and graded in severity using Birmingham Eye Trauma Terminology System (BETTS), [11] time of presentation to hospital, time lag between injury and presentation was calculated and reasons for delay were identified. Other data retrieved were visual acuity at presentation, clinical diagnosis, treatment received, final visual outcome and duration of follow-up visits.

Family violence was defined as any record of assault occurring between two or more members of a nuclear or extended family. Therefore any record of ocular injury resulting from assault by a household member or relation, which occurred within the home, was enrolled in this study as a case of family violence.

All cases of eye trauma, occurring within or around the home, in the course of any intentional act of violence involving the patient, and perpetrated by members of the individuals' household; were included in this study. Other home-related accidents and ocular injury caused by non-family members such as burglars and other strangers as well as ocular injuries that occurred away from the home location were excluded.

Results

During the period under review, a total of 138 cases of ocular injuries reported to the eye emergency room. Seventy- nine (57.2%), of these ocular injuries had occurred within the home setting, and these were identified. Family violence accounted for 16 out of these 79 (20.3%) ocular injuries. The ages of FV victims, ranged from 10 – 45 years with an average of 23.8 years.

Table 1: Clinical characteristics of patients presenting with eye injuries related to interpersonal violence within the home

Age (victim's age in yrs)	Sex (victim)	Injured Eye	Circumstance	Assailant (relationship to patient)	Agent causing injury (physical agent used)	Presenting acuity (injured eye)	Time lag (Time between injury and clinic presentation)	Final acuity (injured eye, VA last visit)	Follow-up (Comments)
26	F	Right	Fight	Husband	Broken bottle (stabbing)	NLP	6 days	NLP	1 month
10	M	Left	Corporal punishment	N/A	Cane	6/60	4 days	6/24	6 weeks
10	M	Left	Corporal punishment	N/A	Cane	LP	4 days	6/60	5 months
45	M	Right	Fight (bystander injury)	Brother	Fist (punch)	LP	5 days	NLP	2months
36	F	Right	Fight	Brother	Fist	NLP	5 hours	NLP	lost to follow-up. 3 days
15	M	Left	Corporal punishment	Uncle	Cane	CF	14 days	CF	Discharged against medical advice, same day
11	F	Left	Corporal punishment	Uncle	Belt	NLP	14 days	NLP	lost to follow-up. 52 days post-surgery
13	F	Left	Corporal punishment	Step-mother	Cane/ stick	6/18	5 days	6/12	lost to follow up. 6 days
12	F	Right	Corporal punishment	Mistress/ guardian	Cane/ stick	6/9	3 days	6/24	lost to follow up. 6 days
14	F	Right	Corporal punishment	Uncle	Comb	LP	4 days	LP	Lost to follow-up, same day (presented with traumatic cataract)
24	F	Right	Fight	Husband	Kick	6/9	1 day	6/5	Lost to follow-up. same day
34	F	Left	Argument	Brother	Slap	6/6	5 days	6/5	4 days
40	F	Both	Fight	Husband	Fist	6/5	2days	6/5	1 week reviewed at 6 months
30	F	Right	Fight	Husband	Slap	6/9	? days	6/9	Lost to follow-up. same day
27	F	Left	Fight	Husband	Fist	6/5	5 days	6/5	3 weeks
33	M	Right	Argument	Wife	Knife (Stabbing)	NLP	5 hours	NLP	2 weeks. developed hd contractured phthisis bulbi following surgical repair

Table 1 shows the clinical characteristics of patients presenting with eye injuries related to interpersonal violence within the home. There were 5 males and 11 females. According to the BETTS classification, there were 9 closed globe injuries, resulting from contusion of the globe, 1 open globe injury from penetrating eye trauma, 1-ruptured globe and 3 cases with mixed injuries. Figure 1 is a pie chart showing the types of agents involved in causing the ocular injury in the 16 cases. Right and left eyes were affected with comparable frequency. Ocular injury to the right eye occurred in 8 cases, and in the left eye in 7 cases, while both eyes were affected in one patient.

Circumstances surrounding the injury were also analyzed. Injury was sustained in a fight or argument in the majority of cases; occurring in 9/16 patients; of these, one patient had not been directly involved in the argument, but was a bystander. A "fight" was defined as any altercation involving 2 or more individuals and involving the use of physical contact from the onset. An "argument" was defined as any altercation between 2 or more individuals involving the exchange of words at the onset.

The remaining 7/16 patients sustained injury as a result of some form of corporal punishment. "Corporal punishment" was defined as physical contact meted out to an individual of younger age or lesser social standing as a means of enforcing discipline or as punishment for wrongdoing as expressed by the perpetrator. This was obtained from the history at presentation.

The assailants (perpetrators) were most often male (11/16 cases), and female in only 3/16 cases. The gender of the assailant was not documented in 2 cases. The relationships of the assailants to the victims are also highlighted in table 1. In the single case where the assailant of a man was his wife, the eye injury was inflicted with a kitchen knife. This was the most severe of all the eye injuries seen in this study. Figure 1 shows the almost unrecognizable globe and full-thickness upper and lower eyelid lacerations at surgery.

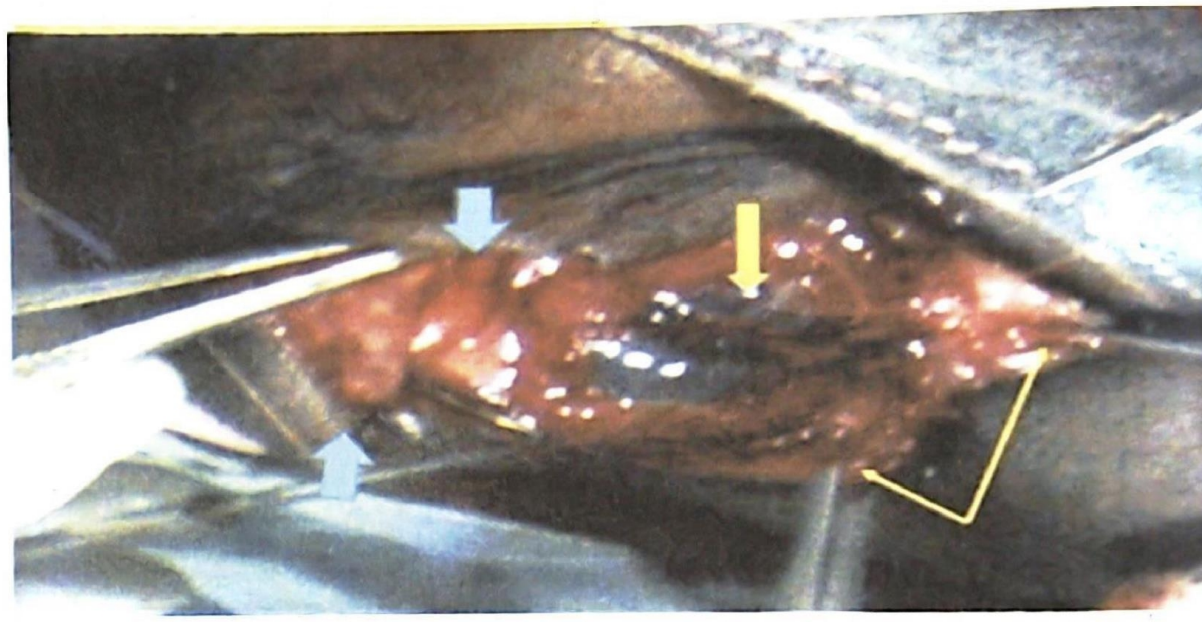

Fig.1: Knife injury to right eye (patient 16) with full thickness upper and lower lid lacerations (identified with forceps) and extensive corneo-scleral laceration to equator above and below (eye is totally disfigured)

The time lag between injury and presentation to the emergency room varied widely and ranged from as little as 3 hours after trauma to as long as 2 weeks after injury with an average of 5.5days (median of 4.5 days). The commonest reason for delay was an attempt to seek an alternative to hospital care, which was the situation in 10 of the 16 cases. Only 4 patients presented 'without delay' i.e. within 24 hours. The reason for delay was not stated in two cases.

Ten patients presented with severe loss of vision in the affected eye (vision <6/18). Eight of these patients presented with vision in the range of legal blindness (i.e. counting fingers, hand movement, light perception or no light perception), while 2 patients presented with low vision (i.e. visual acuity between 6/18 and 6/60). Only 6 of the 16 patients had good vision in the affected eye at presentation.

Four patients required surgery, for repair of a globe rupture or corneal laceration. All four patients

presented with vision between light perception and NPL. The remainder (12/16) had conservative treatment with topical steroids, antibiotics and cycloplegics.

Follow-up by patients was generally poor, with 10/16 patients becoming lost to follow up within a week. Only 6 patients returned for review 1 month or more after first presentation.

The visual acuity at the last clinic attendance was poor in half of the cases; with severe visual loss in half (8/16) of the patients. Vision at presentation is tabulated against final visual outcome and the agent causing injury in table 1.

Table 2.:

Source/Mechanism of injury	No. of cases
Hand/fist (slapping, punching)	6
Cane (whipping)	5
Knife (stabbing)	1
Comb	1
Foot (Kicking)	1
Bottle (stabbing)	1
Belt	1
Total	16

Discussion

Domestic eye injuries constitute a significant proportion of all ocular emergencies. More than half of the annual burdens of eye injuries, worldwide, have been reported to occur in and around the home [9]. Global estimates report that 1.6 million people become bilaterally blind worldwide, from injuries, every year; and a further 19 million are left with unilateral blindness or low vision [9]. While the home is clearly identified as a significant location for eye injuries,[10,12-13] the impact of violence within the home (FV), on the prevalence of eye injuries, has not been specifically emphasized. Consequently, *physical violence against children*, such as 'unrestrained' corporal punishment, is an under-recognized form of "domestic" violence. While the international spotlight has been shining on spousal and intimate partner violence for many decades, less attention has been drawn to this other aspect of violence within the home. Corporal punishment is generally accepted and practiced in the traditional African setting. However, severe eye injuries, resulting from such corporal punishment, do occur and have not received sufficient attention. A recent review of ocular injuries presenting to the University College Hospital showed that 58% of eye injuries occurred in the home setting [13].

Similarly, in this study, 79 of 138 cases, representing 57.2% of the total, had sustained eye injuries at home. However, the nature of domestic injuries in Ibadan has not previously been analyzed in detail. Family violence has been shown to be prevalent, but is still underreported, in the Nigerian society, mostly for fear of stigmatization [6, 7, 16]. Reporting of spousal violence experienced by men in the Nigerian society is even rarer [16]. Violence within the home can therefore easily be missed, if inquiries into the circumstances surrounding domestic injuries are not specifically made [17]. This study seeks to enlighten healthcare workers in general and ophthalmologists in particular, that domestic violence and child abuse causing eye injuries, clearly exists in the Nigerian environment, and these injuries can be severe and even sight-threatening. While spousal or intimate partner violence, is the most advertised cause of family violence in literature [3, 6, 16, 18-20] in this study, spousal violence was second only to corporal punishment as the commonest reported form of interpersonal violence, within the home. Similar to reports in literature, the perpetrators were mostly male [10, 21] and the fist/hand was most often used [20]. It is noteworthy, that the single case of spousal attack, in which the victim was the husband, appeared to be the most violent attack and involved stabbing of the eye through the lids, with a kitchen knife. This appears to support the theory that although women are more likely victims of intimate partner violence, they tend to use more physical aggression towards their male victims, as perpetrators [22]. In a report by Mechem *et al.* 37% of female perpetrators used weapons in the course of intimate partner violence, however most weapons were used in self-defense or in retaliation for a previous abuse [23]. It is not unlikely that this may have been the case in this instance.

Corporal punishment is a time-honored practice in the traditional African setting [5, 8, 24]. However, unbridled corporal punishment must be recognized as violence against the child and therefore understood as a form of child abuse [25, 26].

Family violence appears to be an unrecognized cause of preventable blindness in children and young adults in the developing countries and interventions aimed at reducing the impact of interpersonal violence within the home should revolve around health education and awareness campaigns focused on changing harmful beliefs and traditional practices [2, 9, 21, 27-29]. In this study, 3 out of every 4 cases presented late (>24 hours), with only 1 in 4 cases reporting to the emergency facility within 24 hours of injury. Almost all had tried

some alternative medication or strategy to avoid hospital care and had only resorted to the emergency room when all else failed. The delay in presentation combined with the severity of the eye injuries was compounded by failure to maintain adequate follow up; leading to universally poor outcome of treatment observed in this study. The most effective strategy to reduce the impact of family violence on preventable eye injuries would therefore be the prevention of family violence itself, through education of the health care worker and public campaign against interpersonal violence within the home [3, 5, 30]. The health worker must cultivate a high index of suspicion, and provide full documentation as well as appropriate social service referrals when cases are identified [17, 31]. Institutions must develop and provide clear guidelines for attending physicians and paramedical staff, which will serve as a Standard Operating Procedure (SOP) for the multidisciplinary management of victims of family violence; that incorporates counseling and follow-up services [31].

While corporal punishment may have demonstrated some historical usefulness in enforcing discipline in African homes, there must be a campaign to create awareness of the detrimental effects of reckless use of force and unbridled physical punishment [29]. There have been sporadic reports, which highlighted corporal punishment as a cause of ocular trauma among children in Nigeria, [2, 24, 25,32,33] however, this has neither driven legislation, nor has it received adequate attention in the media. Corporal punishment resulting in physical disability or permanent disfigurement should be discouraged, recognized, and treated, as child abuse, and there should be legislation to uphold and protect the rights of the *minor* in such circumstances [29, 34].

There is also an acute need for both regional and national eye trauma registries in Nigeria, to facilitate the monitoring of ocular trauma statistics for planning and public policy formulation. Primary prevention should be engineered through social reorientation towards less harmful methods of child discipline, which can be encouraged through health education and active media campaigns.

Conclusion

This information should raise the awareness of ophthalmologists to the need for a comprehensive approach to the management of eye trauma resulting from violence within the home, as the ophthalmologist may be the first and only physician to identify these cases of family violence, and should be in a position to provide holistic management and appropriate referral of victims. There is also a need for social reorientation to the concepts of corporal punishment and child abuse. The need for regional and national eye injury registries cannot be overemphasized.

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