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Original Research Article

Epidemiological and Etiological Aspects of Ocular Trauma at the Fana Reference Health Center

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Abstract: Ocular trauma plays an important role in ophthalmological emergencies and poses a real public health problem due to its frequency, severity and impact on visual function [2]. These can include bruises, wounds, foreign bodies and burns [1]. The aim was to study the clinical and epidemiological aspects of ocular trauma at the Fana referral health centre. ***Materials and methods:*** This was a prospective study of 157 cases of ocular trauma out of 2539 patients seen in consultation at the FANA CSRéf from 1er November 2021 to 30 April 2022. ***Inclusion criteria:*** All cases of ocular trauma seen and followed up at the centre. Secondary ophthalmology centre (CSO) in Fana during the study period and having given their consent. ***Non-inclusion criteria***: All patients who consulted for reasons other than ocular trauma and cases of ocular trauma who did not give their consent. ***Results:*** The study involved 157 cases of ocular trauma out of a total of 2,539 consultants, representing a frequency of 6.18%, with males the most affected at 68.2%. It occurred mainly in young, active people aged between 15 and 44 (54.77%); farmers were the most affected (38.2%). Contusions were the most frequent type of trauma, accounting for 49%; wounds of the globe accounted for 13.4% of cases; the aetiological agents were very diverse, but the preponderance of attacks of plant origin was noted, with a frequency of 39.5%. The delay in treatment was long; in our study, 40.8% of patients were consulted more than a week after the trauma. ***Discussion:*** Farmers and stockbreeders were the most exposed to accidents in a rural context, with long delays in treatment leading to complications and irreversible after-effects.

Keywords: Epidemiology, Ocular trauma, Fana reference health centre.

INTRODUCTION

Ocular trauma is an injury or a series of injuries resulting from the action of a physical agent or chemical substance on: the eyeball and its appendages, the bony orbit and the optic pathways; it occurs suddenly. They pose a real public health problem because of their frequency, severity and impact on visual function [2]. Traore L et al, in a study at CHU IOTA, found a frequency of 4%.

METHOD

This was a prospective descriptive study of eye injuries from 1 November 2021 to 30 April 2022. Inclusion criteria: All cases of ocular trauma who were seen and followed up at the Fana secondary ophthalmology centre (CSO) during the study period and who had given their consent. Non-inclusion criteria: Refusal to take part in the study; Patients consulted for other reasons; The lost and found. The minimum sample size was calculated using the SCHWARTZ formula: $n = z^2.p.q/i^2$, which gave us N=131. The data was collected on an individual survey form from the consultation register and patient files.

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RESULTS

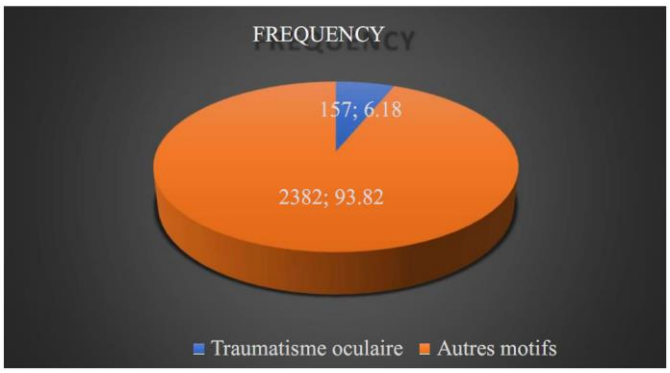

Figure 1: Frequency

During our study period, we carried out 2,539 new consultations, including 157 cases of ocular trauma, representing a frequency of 6.18%.

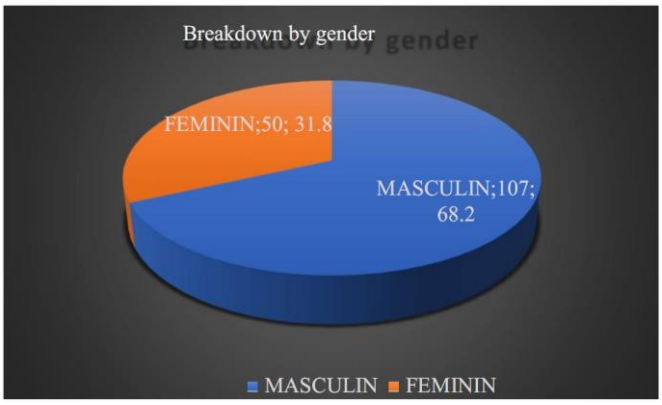

Figure 2: Breakdown by gender

We noted a male predominance in 68.2% of cases of ocular trauma.

Table 1: Breakdown of patients by age

Age in years	Workforce	%
<1	1	0,64
1-5	8	5,10
5-14	33	21,02
14-44	86	54,77
44-60	23	14,65
≥60	6	3,82
Total	157	100

The most represented age group is 15 to 44 (54.77%)

Table 2: Breakdown of patients by profession

Profession	Workforce	%
Pupil/student	30	19,1
Farmer/breeder	51	38,2
Housekeeper	38	23,9
Sales/merchant	11	7
Driver	2	1,3
Civil servant	9	5,7
Welder/ blacksmith	7	4,5
Total	157	100

Farmers were the most affected by eye injuries (38.2%).

Clinical aspects

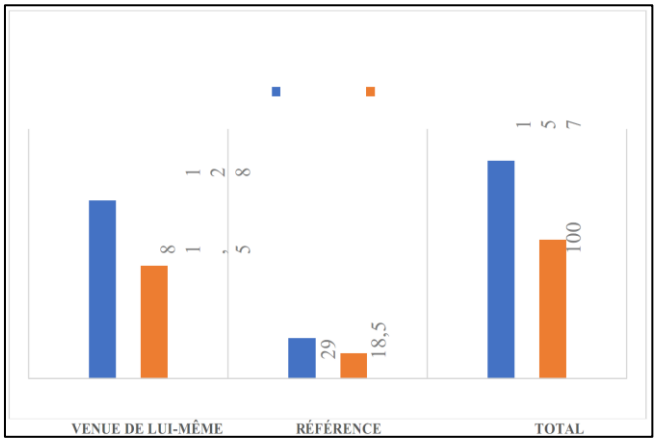

Figure 3: Breakdown of patients by mode of admission

The most frequent mode of admission was self-referral (81.5%)

Table 3: Breakdown of patients by time to treatment

Time between trauma and admission	Workforce	%
<24H	39	24,8
24H to 1sem.	54	34,4
≥1sém.	64	40,8
Total	157	100

We found that 40.8% of patients had a delay in treatment of more than a week.

Table 4: Distribution of patients according to the nature of the traumatic agent

Nature of the traumatic agent	Workforce	%
Plant agent	62	39,5
Metallic agent	13	8,3
Chemical agent	13	8,3
Punch	33	21
Stone thrower	5	3,2
Insect	6	3,8
Agent not specified	14	9,5
Whisk	5	3,2
Other	6	3,2
Total	157	100

Trauma caused by plant agents was the most prevalent, with a frequency of 39.5%.

Other*= animal hooves, animal horns.

Table 5: Breakdown by type of trauma

Types of trauma	Workforce	%
Bruises	73	53,4
Eye wounds	19	12
Foreign bodies	42	26,8
Burns	12	7,8
Total	157	100

We noted a high prevalence of contusive lesions, with a frequency of 53.4%.

DISCUSSION

Frequency

During our study, we recorded 157 cases of ocular trauma out of 2,539 new consultations, representing a frequency of 6.18%. Recent data on ocular trauma show variable rates, so our result is close to that of Sovogui [6] who found 5.9%.

Gender

The predominant sex was male (68.2%), which is higher than that reported by Sovogui [6] but lower

than that of Traoré L (72%). Men are more often involved in activities involving a risk of trauma than women.

Age

The age group most affected was 15 to 44 (54.77%). At the extremes of life (under 1 year and over 60), eye injuries were less frequent.

The profession

Farmers and stockbreeders were the most affected by ocular trauma (38.2%), followed by housewives (23.9%) and pupils/students (19.1%) in our study, whereas Sovogui [6] in Guinea and Ebana MSR and Coll [11] in Cameroon reported the same occupational category as predominant (workers) with 37.2% and 23.6% of cases respectively. This difference could be explained by the fact that our study area was rural, with a large proportion of the population engaged in agriculture and livestock farming.

Payment deadline

In our study, only 24.8% of patients were treated within 24 hours of their trauma. The delay in treatment could be explained on the one hand by self-medication and consultation in centres not specialised in ophthalmology, and on the other hand by the distance between certain areas of the health district and the secondary ophthalmology centre, which is the only specialised centre in the Fana health district.

The nature of the traumatic agent

In our series, vegetable agents were the most predominant (39.5%), followed by blows (21%), and metallic and chemical agents came in 3rd place with a frequency of 13% each. This predominance of vegetable agents is confirmed by Sovogui [6] in Guinea, who reported 31.7%.

Eye damage

The lesions observed ranged from simple conjunctival irritation or simple palpebral oedema to burst eyeballs. They consisted mainly of contusions, with a rate of 53.4%, followed by superficial foreign bodies (26.8%), ocular wounds (12%) and then burns (7.8%).

CONCLUSION

Ocular trauma plays an important role in ophthalmological emergencies and poses a real public health problem because of its frequency, severity and impact on visual function.

REFERENCES

1. Sidibe, M., Dembele, A., Napo, A., Diallo, O., Conare, I., Fomba, S., ... & TRAORE, J. (2014). Traumatisme oculaire par aiguille de tresse à l'Institut d'Ophtalmologie Tropicale de l'Afrique (IOTA). *Revue SOAO*, *2*, 13-18.
2. Songrou, F. K. B., Mobima, T., & Leklegban, C. (2017). Traumatisme oculaire à Bimbo (République Centrafricaine): contribution de l'échographie. *J Afr Imag Méd*, *9*(2), 56-9.
3. Kouam, J. M., Epée, E., Azria, S., Enyama, D., Eballe, A. O., Mvogo, C. E., & Cherifi, M. (2015). Aspects épidémiologiques cliniques et thérapeutiques des traumatismes oculaires de l'enfant dans un service d'urgences ophtalmologiques en Île-de-France. *Journal Français d'Ophtalmologie*, *38*(8), 743-751.
4. Koki, G., Nsoh, C. M., Epée, E., Eballe, A. O., Bella, L., & Mvogo, C. E. (2015). Profil des affections oculaires en milieu militaire au Cameroun. *Revue SOAO*, *1*, 46-52.
5. Sounouvou, I., Zoumenou, E., Alamou, S., Tapsoba, Y., Tchogang Tchingoua, N., & Tchabi, S. (2014). Traumatismes oculaires à la Clinique Universitaire d'Accueil des Urgences du CNHU-HKM de Cotonou (CUAU). *Rev Afr Anestésol Méd Urg*, *19*(2), 23-6.
6. Sovogui, M. D., Zoumanigui, C., Doukoure, M. B., & Diop, M. S. (2022). Les Traumatismes Oculaires dans la Région Administrative de Labé en Guinée: Eye injuries in the administrative region of Labé in Guinea. *HEALTH SCIENCES AND DISEASE*, *23*(5).
7. Koné, Y. (2015). Etio-pathogenic, clinical and therapeutic aspects of ocular trauma in the CSRéf of Kita in 2015: about 2130 cases. Thesis of medicine, FMOS Bamako USTTB.
8. Traoré, L. (2022). *Parcours des traumatismes oculaires chez les enfants de 0 à 15 ans au CHU-IOTA* (Doctoral dissertation, USTTB).
9. Makita, C., Nganga Ngabou, C. G. F., & Madzou, M. (2016). Traumatismes oculaires de l'enfant: aspects épidémiologiques, cliniques et thérapeutiques. *Revue SOAO*, *2*, 46-50.
10. Sissoko, M., Guirou, N., Romuald Elien GY, R., Saye, G., Simaga, A., Diallo, H., ... & Sylla, F. (2021). Eye traumatism during the COVID-19 sanitary crisis at Iota-teaching hospital. *J Fr Ophtalmol*, 145-150.
11. Ebana, M.S.R., Dohvoma, V.A., Elele, M.M.M., Mvilongo, T.C., Akono, Z.M.E., Nguena, M.B. (2019). Epidemiological and clinical profile of oculo-orbital trauma received at Yaoundé Central Hospital**.** *Revue SOAO*, *2*, 53-55.

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