

Blindness following Bilateral Eye Rupture in a Child by Firearm Injury

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Abstract: Trauma by firearm is not a common cause of blindness in Mali. Bullets from firearms are very traumatic for the eye. We report the case of a primary school boy aged 14 years old who lost both eyes after he was shot by the son of his host. The victim was seriously injured by the bullets and was taken to the Institute of African Tropical Ophthalmology.

Keywords: Blindness, Eye rupture, firearm, injury.

INTRODUCTION

Firearm related injuries are defined as those associated with guns that use a powder charge to fire a projectile [1]. Injuries and fatalities resulting from air weapons have been widely reported [2]. Eye injuries are an important cause of ocular morbidity in children, being a leading cause of non-congenital unilateral blindness [3]. Bilateral blindness by firearm injury is relatively rare in Mali, it constitute a great concern due to its consequences on the social and professional feature of the victims.

CASE REPORT

We report the case of a 14- year- old primary school boy who was shot by the son of his host. The assault happened on May 18th, 2013; while they were heading for the farm, the father of the attacker took his traditional gun with many projectiles inside. When they reached the farm, the old man handed over the gun to his son and moved several miles away. Suddenly, his son of 19-year-old shot deliberately the victim. On arrival, the child was fully conscious but was a little bit depressed. The clinical findings were: the presence of multiple bullet entries on both eyes with hemorrhage and swelling. There was powder "tattooing" around the entrance sites. The visual acuity was NPL (non perception of light) both eyes. An orbital-cranial computed tomography (CT) was performed and shown the presence of bullets in the orbital cavities. The victim was then examined and operated under general anesthesia. Under the operating microscope, the clinical findings were: a scleral wound of the right eye which was sutured, and a rupture of the left eye which was eviscerated. There was no exit wound, the bullets were

inside the orbit; and were removed. He was discharged three weeks later. The findings of the final examination were: blindness in both eyes. Six months follow up showed no particularity.



Fig-1: the victim 1 day after the gunshot



Fig-2: computed tomography showing the bullets



Fig-3: the victim 2 years after the gunshot

DISCUSSION

The case presented here, an intentional firearm injury is uncommon in our society. Unlike developed countries, where violence is increasing and people have easy access to firearms [4], Mali is a country where detention of firearms is strictly regulated. Ocular injury is a frequent, preventable cause of visual impairment, with a lifetime prevalence of 19.8% [5]. Gunshot injuries to the orbita are uncommon [6]. In the USA, more than 33% of intentional injuries and 13.6% of accidental gunshot injuries are to the head and neck region and orbita [7]. In the United Kingdom and Eire, Shuttleworth et al. found 22% of globe rupture caused by air gun injuries [8]. The current case occurred in a context of violent and intentional injury. The World Health Organization World Report on Violence and Health urges member nations to examine the impact of intentional injury and develop strategies to reduce violence [9].

CONCLUSION

Ocular injuries with firearms are sight threatening trauma. The current case which ended up with blindness is uncommon.

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