

## OCULAR BB INJURY PRESENTING AS AN INTRASCLERAL FOREIGN BODY

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### Abstract :

A seventeen year old boy suffered from Ball bullet (BB) injury in the left eye following which he underwent exploratory surgery where a BB pellet was seen as intrascleral foreign body without ocular penetration. This case highlights another situation where BB injury can present as intrascleral foreign body.

**Keywords :** BB injury - Intrascleral foreign body

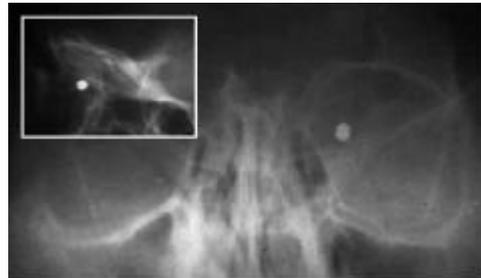
### Case report:

A seventeen year old boy was victimized in a gun shot injury accidentally when he was waiting outside his house two months back when a bullet hit on the left eye in a cross fire. It was associated with blurred vision. Examination of the right eye was unremarkable and visual acuity was 20/20. Unaided visual acuity in the left eye was 20/30. Anterior segment examination of the left eye showed conjunctival congestion with subconjunctival hemorrhage in the superior fornix at 10 to 12 'O' clock position. Other anterior segment findings were within normal limits. Dilated fundus examination of the left eye showed vitreous hemorrhage inferiorly and a large preretinal blood clot was seen superonasally. The underlying retina was not visible. B scan ultrasonography showed the presence of a large foreign body in the ocular coats at the site of the wound (Fig I) and radiograph (anterior posterior and lateral view) showed radio opaque foreign body in the superior orbit (Fig II). The Patient was not offered ocular evaluation with CT scan so an exploratory surgery was planned with removal of the foreign body. At the time of surgery, after 360° peritomy and bridling of the four rectus muscles, an encapsulated foreign body was seen superonasally between the medial and superior rectus muscle ( Fig. III ). After teasing of the fibrous capsule, a BB pellet (Fig III inset) was seen partially in the scleral coat and the rest exterior to the sclera. When the BB pellet was removed, the underlying choroid and scleral defect was evident (Fig. III inset). The scleral wound was sutured followed by cryopexy, and then segmental circumferential scleral buckle ( # 279 tire / # 240 band ) was done ( Fig. IV ). Funduscopy done intraoperatively showed good buckle effect with hemorrhage over the area without any obvious evidence of retinal break , though the underlying retina was not visible clearly. Six weeks postoperatively there was partial resolu-



**Fig I :** B-scan ultrasonography showing high echo reflectivity with acoustic shadowing within the ocular coats suggestive of foreign body

Ocular ball bullet ( BB ) injuries are vision threatening and more than a few ultimately result in eventual enucleation. However patients without open globe injuries have better visual prognosis. <sup>1,2</sup> Orbital and intraocular foreign body has been reported earlier , but intrascleral foreign body especially with BB pellet has not been described. This case report enumerates ocular BB pellet injury in a 17 year old boy presenting as intrascleral foreign body without globe penetration.



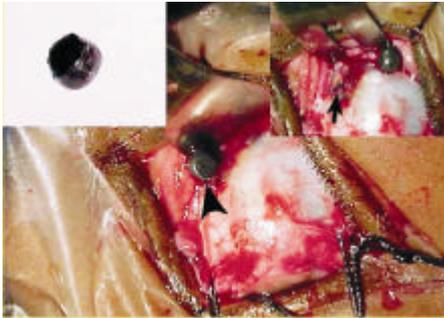
**Fig II :** Radiograph showing radioopaque Foreign body in the superior orbit

tion of the vitreous hemorrhage superiorly over the retina with good buckle effect and unaided visual acuity of 20/25. Follow up at three months showed no further complications.

#### Discussion :

Ocular BB injuries are usually vision threatening and result in open globe injuries which have poorer visual prognosis than closed globe injuries<sup>1,2</sup>. The Bullet can cause extensive ocular injuries including choroidal and retinal concussion resulting in chorioretinitis sclopetaria.<sup>3</sup> Intrasclear foreign body has not been reported so far, however situations simulating as such have been reported.<sup>4</sup> In this case funduscopy did not reveal any IOFB as visualization may have been obscured over the concerned area due to vitreous hemorrhage. However, B scan Ultrasonography (fig I) revealed high reflective echo spikes with acoustic shadowing entirely within the ocular coats. Surgical manipulation revealed intrasclear foreign body without choroidal penetration.

BB injury without ocular penetration presenting as intrasclear foreign body has not been reported earlier. This case highlights another mode of presentation following BB injuries as closed globe



**Fig III :** showing BB pellet (arrowhead) at the site of injury; Inset (right) showing the area of injury; Inset (left) showing the BB pellet.

injury with better visual prognosis. Beirouty et al<sup>5</sup> reported an interesting case of disappearing bullet where a gun pellet fell from the superior fornix after a period of observation. Localization of the foreign body and careful examination along with radiography, ultrasonography and CT scan is necessary. Our case does suggest a perplexed situation where on preoperative status there appeared to be a foreign body located partially intraocularly and in the ocular coats. However, the intraoperative assessment revealed intrasclear position without ocular penetration. This youngster was clearly fortunate that the foreign body stopped short of penetrating full thickness of the ocular coats and was just lodged anterior to the equator causing a lamellar laceration of the eye wall and resulting in excellent visual prognosis.

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