

Background: An Orbital foreign body (OFB) is an important cause of ocular morbidity, especially in the pediatric and adolescent age group. Orbital foreign bodies are more commonly observed in younger males than in females. OFB can cause severe complications like rupture of the globe and vision loss. Organic FB is poorly tolerated than inorganic FB. Accidental trauma (41%), physical assault (48%), and iatrogenic trauma or default surgery (11%) are usual modes of OFB.

Aim: To evaluate the pattern of injuries caused by orbital foreign bodies and types of foreign bodies and describe the management outline, including clinical presentation, radiological appearance, and treatment protocol.

Materials and Method: This observational case series study was conducted in a tertiary eye hospital in Bangladesh from January 2013 to December 2020. Variables included demographic, clinical, the pattern of injuries, types of foreign bodies, medical and surgical treatment, and treatment outcome.

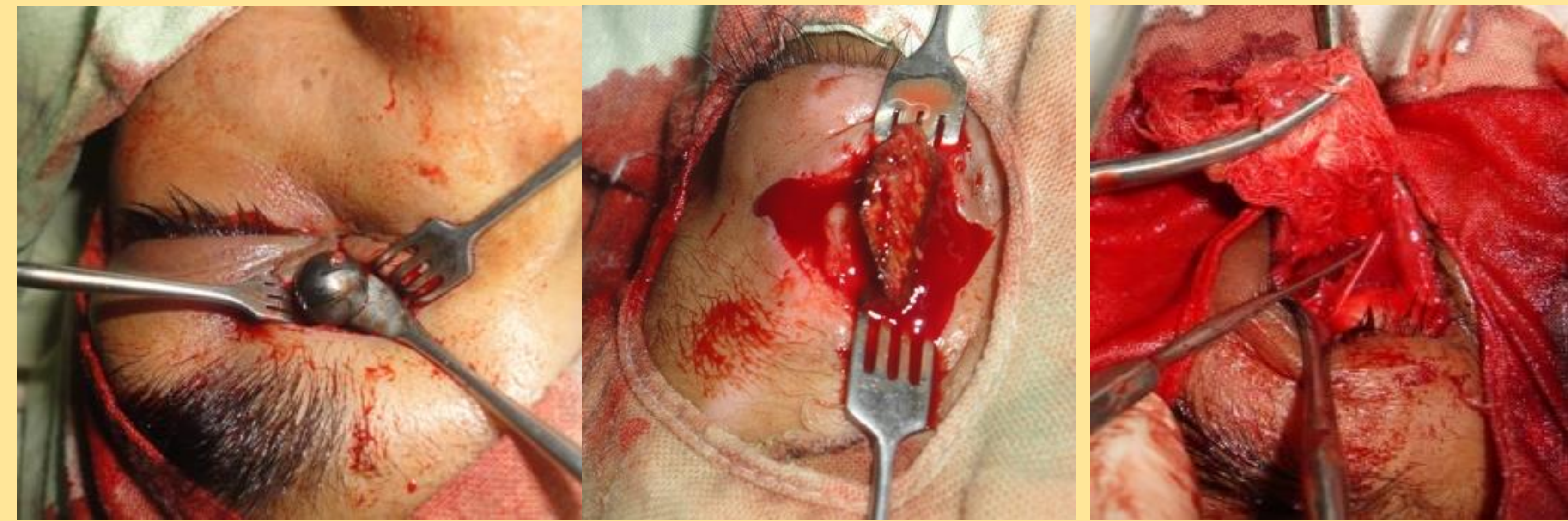
Table 1: Pattern of orbital foreign bodies

OFBs	No.	%	Pattern of OFB
Metallic	15	34%	Pellet: 8 (53.3%) Others: 7 (46.7%)
Vegetative	19	43.2%	Bamboo stick: 9 (47.4 %) Wooden piece: 8 (42%) Thorn: 2 (10.5%)
Nonorganic nonmetallic	10	22.7%	Silicone material -02 (20%) Plastic 02 (20%) Glass particle 02 (20%) Gauze piece 02 (20%) others: 02 (20%)

References:

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Figure 1 (a-c): Different types of OFBs



Results: A total of forty-four (44) patients were analyzed, including male patients (75%) and female patients (25%) with orbital foreign bodies. Most of the patients (82%) were below 40 years of age and young male patients. The mean age was 28.26 years, and the median age was 24 years. The patterns of injuries were Accidental trauma (47.7%), physical assault (38.6%), and iatrogenic (13.6%). The kinds of OFBs included metallic (34%), vegetative/wooden (43.2%), and non-organic nonmetallic (22.7%). Orbitotomy (84%) had found as the primary approach of the surgery in this study. After six weeks of treatment, the improvement of visual acuity was highly significant (P-value <0.001).

Conclusion: Accidental trauma is the leading cause of OFB. Metallic foreign was found as higher than other OFBs. Young age is a preponderance for the injury. Early diagnosis, surgical exploration, and extraction, when indicated, significantly impact visual prognosis and outcome.

Fig. 2 (a-d): 16 years old boy presented with entry wound in RUL, Xray orbit lateral view showing metallic OFB, OFB removed from the Right Orbit

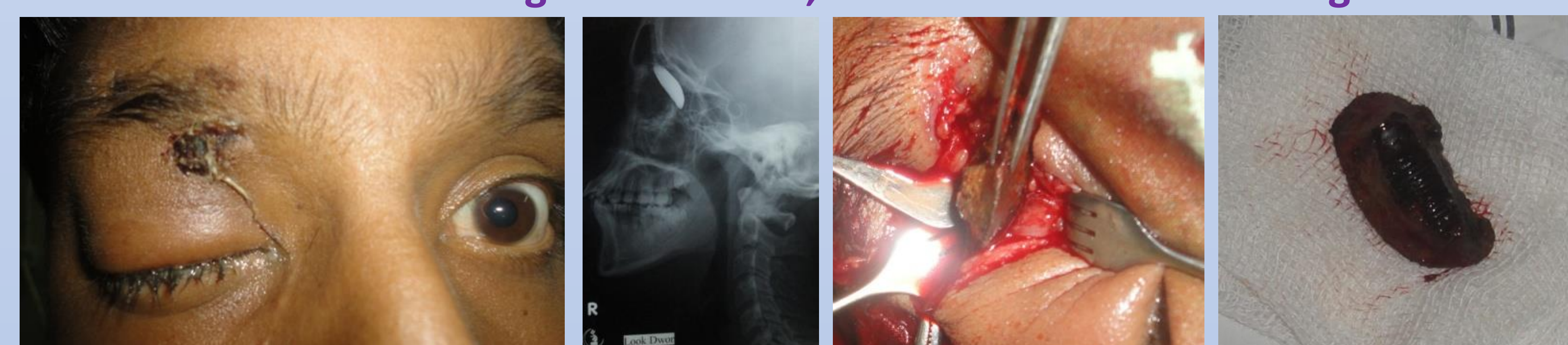


Figure 3 (a-e): Standard clinical photo showing an 8×10 mm at the medial aspect of the upper eyelid. A hypo-intense mass with surrounding hyper-intense lesion in the right superior orbit on axial image of MRI of the orbit which was suggestive of Wooden foreign body. Orbitotomy was made and a cylindrical shaped wooden foreign body was extracted from the orbit.

