

References

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A metallic intraocular foreign body discovered 26 years after ocular injury

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The frequency of IOFB following penetrating eye injuries is approximately 40% [1,2,3] and the incidence of intraocular metallic foreign body is approximately 78% to 86% [3,4]. Retained IOFB can cause complications such as endophthalmitis, cataract, retinal detachment, glaucoma and ocular siderosis [4]. IOFB resulting from penetrating ocular injuries are usually detected at the first visit, however, the presence of IOFB may not always be readily identified and symptoms may only become apparent after a prolonged period of time causing complications.

We report a case of an asymptomatic intraocular foreign body that was retained for 26 years after penetrating ocular injury.

Case report

A 44-year-old man who suffered ocular trauma in 1983, presented with decreased visual acuity in his left eye. In the right eye, we did not find any obvious abnormalities. In the left eye, the best-corrected visual acuity was 20/40. A corneal punctiform opacity suggesting an entry wound scar, a mild posterior subcapsular cataract associated with anterior and posterior capsular punctuate opacities facing the corneal scar (Fig.1, 2). Funduscopy showed no definite abnormalities in either eye. Intraocular foreign body was suspected and orbital computed tomography was performed. It confirmed the presence of a round hyperdense metallic body that has a 2.9 mm of size and located near to the ciliary body (intra zonular foreign body) (Fig.3). The electroretinogram (ERG) revealed an ocular siderosis with an amplitude decrease of both positive (a wave) and negative (b wave) components in the photopic system (Fig. 4).

We indicated therapeutic abstention in this patient because of relative conservation of visual acuity at 20/40

despite ocular siderosis and the localization of the foreign body which was inaccessible.

Figure 1 : Posterior subcapsular cataract

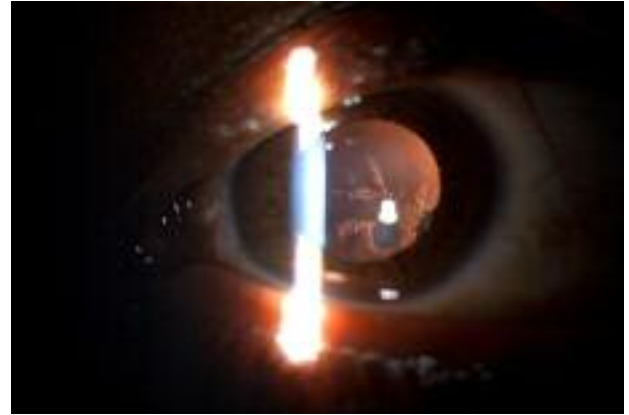


Figure 2 : Punctiform corneal scar, anterior and posterior capsular opacities facing the corneal scar

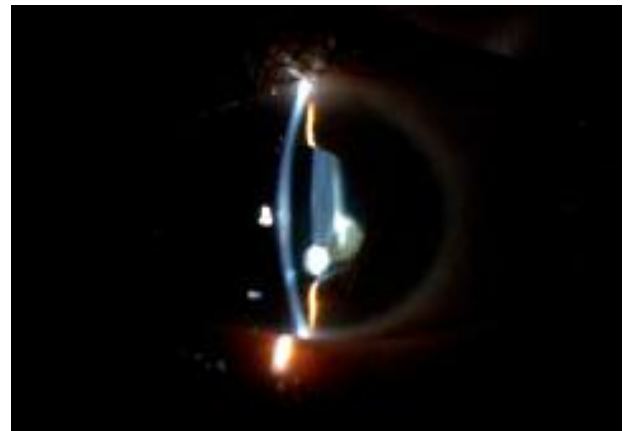


Figure 3 : Intra Zonular foreign body

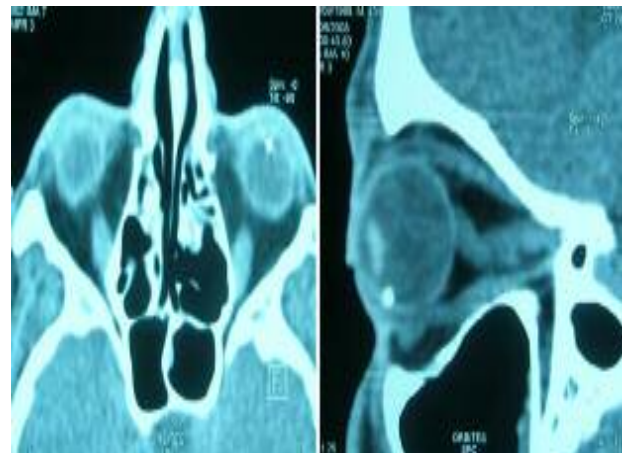
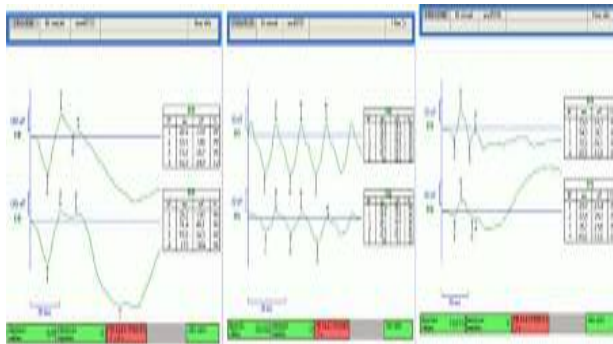


Figure 4 : Ocular siderosis at the ERG: positive and negative components decreased



Conclusion

Some IOFB can be retained without any symptoms for an unusually long period of time (from 6 months to 30 years) if visual acuity was preserved and this may be related to their encapsulation by a thin membrane [1,2,5]. The healing capacity of the anterior lens capsule, in contrast to the posterior capsule is well documented [1,2]. When the capsule defect is small, epithelial proliferation rapidly restores its continuity, limiting the free passage of ions and fluid that may result in progressive cataract formation.

Intra zonular foreign bodies are located uncommon following penetrating eye injuries [5]. Orbital computed tomography is a sensitive method to detect all kinds of IOFB especially more than 0.3mm. Magnetic resonance imaging can localize a non-metallic IOFB, but is contraindicated in the case of metallic IOFBs and may produce motion artifacts [5].

Electroretinography can be used to follow the course of a developing siderosis and provides useful information when a decision has to be made as to the advisability of undertaking a dangerous operation for the extraction of a foreign body.

Surgical indication of intra zonular foreign body depends on the size and presence of ocular complications such as intraocular inflammation, cataract formation, or siderosis bulbi [1,5].

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