

# The Hidden Metal, Threatening Sight - A Uniquely Managed Case of Siderosis Bulbi

Kavya Nagaraj, Anand Balasubramaniam, Divyanshu Mishra

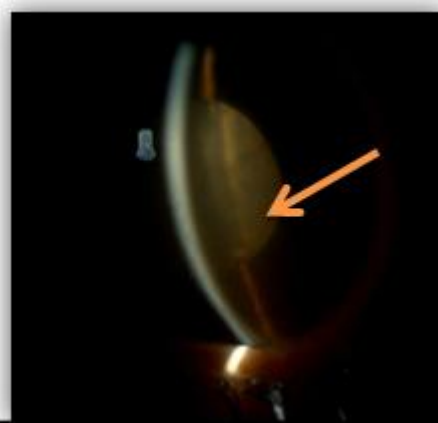
**Abstract:** We present a case report of unilateral ocular siderosis in a young girl following fire cracker injury, and its management as a staged approach. Ocular Siderosis, although uncommon needs high degree of suspicion and a detailed evaluation to look for the presence of the inciting factor. When identified early, the damage to retinal ganglion cells can be reversible and vision saving.

**Keywords:** ocular siderosis, trauma, IOFB, Parsplana vitrectomy, penetrating keratoplasty

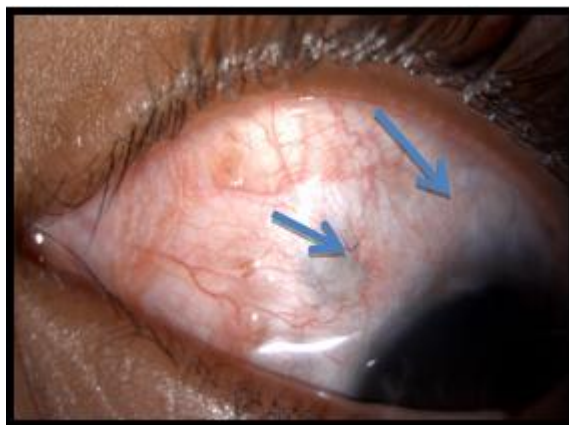
## 1. Case Presentation

10 year old girl presented with history of Fire cracker injury to left eye few years ago following which she had defective vision with a Characteristic head tilt to right side, An otherwise healthy child, had a History of vitreoretinal surgery done elsewhere during acute management of

trauma. On examination, the child had a BCVA of 6/12 in the right eye, with an unremarkable anterior segment and PL perception of light in the left eye, with IOP of 12mmHG and 22mmhg in the right and left respectively. Left eye examination showed limbus to limbus hazy cornea with diffuse endothelial pigments and a cataractous lens.



Hazy cornea, with diffuse endothelial pigments limbus to limbus. Pupillary reaction was not brisk and an Intumescent cataract was seen



Areas of scleral ports were noted

Furthermore old Records showed that

- Child had sustained Scleral Tear with Vitreous Hemorrhage, with suspected IOFB, after which, Child was taken up for Pars Plana Vitrectomy with lens extraction with IOFB removal and silicone oil infusion.

Child had improved clinically with a Postoperative aphakic correction – BCVA – 6/18

- 6 months later, child presented with fall in BCVA from 6/18 to 6/60 with progressive endothelial pigment dusting.

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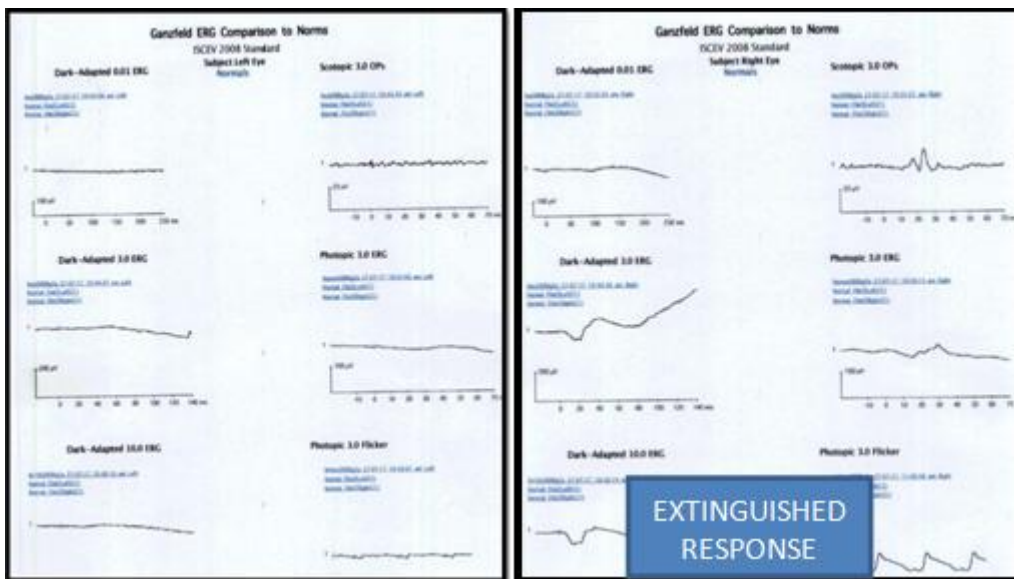
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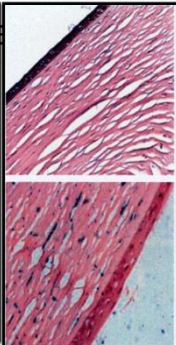
Diffuse and persistent endothelial pigmentation of the cornea left eye, increasing heterochromia of iris

ERG was the done to notice an extinguished response in the left eye

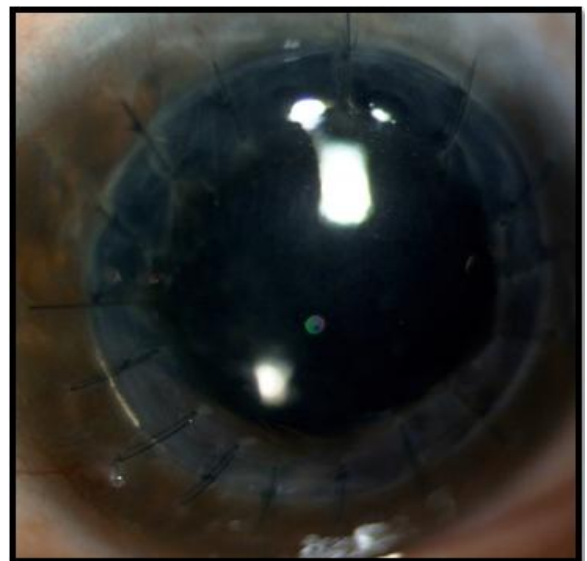


- Corneal tissue sent for histopathological exam confirmed the same

HISTOPATHOLOGY TEST REPORT	
<b>HISTOPATHOLOGY (HP1) (SMALL)</b>	
<b>GROSS</b>	
Received transparent tissue bit measuring 0.5cm in diameter, bisected. (1A)	
<b>GROSSING DONE BY</b>	
DR. ANTHA	
<b>MICROSCOPY :</b>	
Section studied shows tissue fragments lined by unremarkable corneal epithelium. Stroma appears oedematous and shows brownish granular pigment within the layers which have blue to purple appearance on per's stain confirming presence of iron. Section is negative for granulomas or malignancy.	
<b>IMPRESSION :</b>	
Features consistent with ocular siderosis	
<b>SITE :-</b>	
Left eye- cornea	



The child did well and has had a clear graft with iris claw lens and aBCVA of 6/18



Postop 1 Month – Clear Graft with IRIS Claw Lens BCVA – 6/18

## 2. Discussion

- Ocular siderosis – uncommon, severe sequelae of a retained IOFB, following trauma. Siderosis Bulbi known to occur as early as 18 days to 12 years post penetrating trauma<sup>1</sup>
- In our case, though the IOFB that incited the Siderosis was removed, there was a persistent pigment release, with worsening vision that warranted full thickness keratoplasty in this child
- Ferrous particles which dissociate from the metallic IOFB could also be diffused over intraocular structures and fluids and hence delayed or a latent presentation of Siderosis Bulbi is not uncommon.

## 3. Conclusion

- Careful clinical and radiological examination, to look for an IOFB in every case of penetrating trauma, is crucial. A missed metallic IOFB, has vision threatening implications especially in the pediatric age group. Onset of Ocular Siderosis should warrant repeat and reevaluation thoroughly, and immediate measures to hunt for the hidden IOFB. When identified and Surgically managed immediately, Pigmentary Retinopathy changes can also be reversed and further visual damage can be prevented

## References

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