

# A Case of Retained Intra Orbital Foreign Body for 3 Months

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## ABSTRACT

Orbital foreign bodies are not only difficult to detect but if retained for a long time can cause drastic complications such as orbital cellulitis, damage to extra ocular muscles and optic nerve injury. A prompt diagnosis and earlier removal can minimize the complication rate. Complications vary according to size, site and type of foreign body. Retained foreign bodies are very difficult to diagnose especially of wooden type even with advanced imaging techniques. We report a case of intra orbital wooden foreign body which was present for three months in a young boy.

**Key Words:** Computed Tomography, Foreign body, orbit.

**How to Cite this Article:** Sameen M, Azeem T, Yaqub MA. A Case of Retained Intra Orbital Foreign Body for 3 Months. Pak J Ophthalmol. 2022, **38** (4): 299-301.

Doi: 10.36351/pjo.v38i4.1422

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*Received: May 14, 2022*  
*Accepted: August 27, 2022*

## INTRODUCTION

An Intra orbital foreign body is referred to a foreign body that is present within the orbit but outside the globe.<sup>1</sup> The cause is usually a high velocity injury such as a gunshot or an industrial accident. However, sometimes a trivial trauma can cause the foreign bodies to enter the orbit. Radiographic investigations are important including computed tomography and magnetic resonance imaging, which play an important role in reaching the correct and definitive diagnosis. The aim of this report is to highlight the diagnostic and treatment challenges of intra orbital foreign body.

## Case Presentation

A 5 years old boy presented to Armed Forces Institute of Ophthalmology with complaint of pain, swelling and discharge from a sinus located below the right eye. There was a history of trauma with pencil 3 months back. There was no history of diplopia, photophobia,

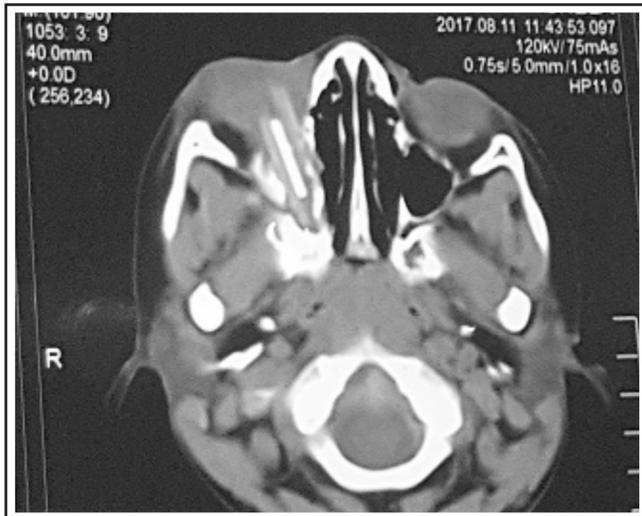
floaters, flashes of light, ocular medication, eye rubbing or allergies. Family, drug, personal and socioeconomic history were not contributory.



**Figure 1:** Pre-operative discharging Sinus caused by wooden foreign body.

On general physical examination, a young boy, conscious, co-operative, well oriented in time place and person with stable vital signs was sitting comfortably. Uncorrected visual acuity was 6/6 OU. Intraocular pressure was normal in both eyes. Slit lamp examination of anterior segment and posterior segment of both eyes was unremarkable. A running sinus was situated 6 mm below right orbital margin (Figure 1). It was associated with pain and swelling. Extraocular movements were intact in both eyes along with intact

eyeball. Systemic examination was non-contributory. CT scan of orbit was performed to see the extent and location of intra orbital foreign body, which revealed a



**Figure 2:** CT Scan Axial view showing foreign body in right Maxillary Sinus.



**Figure 3:** A wooden pencil of 40mm× 22mm removed from maxillary sinus.

40mm × 22mm radiolucent foreign body with radiopaque center. It was extending from floor of orbit to upper part of maxillary sinus (Figure 2). Through anterior orbitotomy sub-ciliary approach, a wooden piece of pencil about 40mm × 22mm was removed under general anesthesia (Figure 3).

## DISCUSSION

Orbital foreign body is difficult to detect on routine x-ray. Patients with orbital injuries report to medical centers, which do not have CT or MRI facilities. Even if they have, orbital foreign bodies are still a serious diagnostic problem. Among orbital foreign bodies, wood accounts for approximately 6% which are radiolucent.<sup>2</sup> Penetrating injury of the orbit is a serious life-threatening condition, as foreign body piercing the orbital wall may damage the brain and cavernous sinus. Such injuries are associated with 25% mortality and therefore, every wound within orbital area requires thorough diagnostic techniques to locate intraorbital foreign body.<sup>3</sup>

Common causes of a discharging sinus near the orbital margin are tuberculosis, fungal or bacterial osteomyelitis and retained intraorbital foreign bodies.<sup>4</sup> Imaging techniques help to confirm the presence of intraorbital foreign bodies, their number, precise location and also to rule out damage to other anatomical structures including eyeball damage, orbital walls and extra ocular muscles. Like many structures that are hypo dense, dry wood is also hypo dense and resembles gas on CT scan. Magnetic resonance imaging is the most effective investigation in the diagnosis of intraocular and intra-orbital non-metallic foreign bodies.<sup>5,6</sup> In our case, the retained intra orbital foreign body was radiolucent. We had suspicion of a metallic foreign body but it came out to be wooden. The patient had trauma 3 months back with pencil, which was primarily repaired without removal of foreign body. Wooden foreign body cause inflammation and should be removed taking care that it is completely removed without any residual fragment. Post-operative MRI is always recommended to rule out residual fragments.

## CONCLUSION

We removed an intra orbital foreign body which was retained for 3 months and caused severe inflammation of the orbit and maxillary sinus. If left there, such non-metallic organic foreign body can lead to loss of vision

and can be life-threatening. It should be surgically removed for preservation of vision.

**Conflict of Interest:** Authors declared no conflict of interest.

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## Authors' Designation and Contribution

Murtaza Sameen; Registrar: *Concepts, Design, Literature search, Manuscript editing.*

Teyyeb Azeem; Assistant Prof: *Data Collection, Manuscript writing.*

Muhammad Amer Yaqub; Professor: *Manuscript review, Final approval of Manuscript.*

