Retained intraorbital foreign body imaging!

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DESCRIPTION

A 34-year-old deaf and mute male patient presented to our institute with chief problem of mass on the right eye (RE) upper lid and drooping of the right upper eyelid for 1 month. The trauma history could not be elicited as the attender was not aware of it and noticed only when the mass became large in size.

Visual acuity assessment was not possible in this case considering his mental acuity. Examination of the right eye showed a mass of 5 × 5 mm in the upper lid associated with severe ptosis. Ocular movements were full and free in all directions (figure 1A). On slit lamp examination there was discharge and congestion of palpebral conjunctiva, but the rest of the anterior segment examination as well as fundus was normal (figure 1B).

A CT scan was reviewed and found to have a hyperdense linear mass suggestive of a foreign body contiguous with inflammatory changes in superior orbit (figure 2A). A metallic foreign body was hence suspected and the patient was planned for exploration and foreign body removal. Intra-operatively a single large wooden foreign body was noted embedded within orbital fat associated with granuloma. It was removed in toto and sent for microbiological assessment along with granulomatous tissue. The patient was then treated with

Figure 1 (A) Standard clinical photo showing the right eye (RE) 5x5 mm mass on the upper eyelid along with severe ptosis. (B) clinical photo of RE showing matting of lashes and palpebral conjunctival congestion.

Figure 2 (A) CT scan of orbit in axial cut showing hyperdense linear mass suggestive foreign body contiguous with inflammatory changes. (B) Blood agar plate showing wooden foreign body along with surrounding growth (*Pseudomonas aeruginosa* and *Bacillus* sp).

Patient's perspective

I had been told that my brother had a foreign body that entered through the upper eyelid. As the foreign body is causing redness and swelling of the eye, it should be removed surgically.

Learning points

- ▶ A hyperdense foreign body may not always be metallic.
- ▶ Wood can present as isodense, hypodense or hyperdense depending on the environment.

systemic cefuroxime based on antibiotic sensitivity (figure 2B).

In Scofield-Kaplan *et al* reported a similar case. Normally wooden foreign body detection on a CT scan is difficult.¹ It appears isodense or hypodense and can mimic air or fat. Wood, being highly porous can imbibe fluid and then appear hyperdense on CT. The change in attenuation of wood depends on its local environment. Dry wood with high air content has low attenuation and mimics gas collection, and wood that has absorbed fluid gets organised and shows high attenuation.² In our case, similarly a long standing retained wooden foreign body appears hyperdense on imaging.

To conclude, a long standing retained foreign body appearing hyperdense on imaging may not always be a metallic one. A wooden foreign body tends to change its imaging characteristics with time based on the surrounding environment.

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