FOREIGN BODY MASTOID

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Introduction

The mastoid is an uncommon site for foreign bodies to impact. A rare case of foreign body right mastoid, which had exposed the sigmoid sinus and presented after eight years, is reported.

Case Report

A 38-year old male received a mine blast injury involving the face, chest and right ear on 13 May 88. He was treated at a service hospital, observed for two years and found fit in 1990. He was not aware that a foreign body had impacted in his right mastoid. From 1996, individual developed intermittent purulent discharge in the right postaural groove. He reported to various hospitals on several occasions. He was treated with antibiotics with temporary relief of symptoms. He presented to us with similar complaints in Nov 98. There was no history of deafness, tinnitus, vertigo, fever or discharge from the external auditory canal. His general and systemic examination was within normal limits.

ENT examination : Nose, throat and left ear examination showed no abnormality. Right ear examination-Pinna showed old healed scars. The postaural groove revealed a discharging sinus in the inferior third part. External auditory canal showed purulent discharge from the posterior wall at the junction of cartilage and bone. The tympanic membrane was intact and mobile. Tuning fork tests and hearing were within normal limits. Otoneurological examination revealed no abnormality. Psychiatric examination showed somatic preoccupation. No features of depression or psychosis were evident. Investigations : hemogram, urinalysis, caloric tests were within normal limits. Pus culture revealed no

Fig. 1 : X-ray right mastoid Schueller's view showing radio-opaque foreign body 15 mm long in region of right mastoid

growth after 48 hours. X ray mastoid revealed a radio-opaque foreign body in the region of right mastoid measuring 15 mm in length (Fig 1). CT scan head showed a 21 mm long metallic foreign body in right temporal bone in the mastoid projecting slightly into the cranium (Fig 2).

Individual was diagnosed as a case of foreign body mastoid right with discharging postaural sinus. On 12 Nov 98 a right mastoid exploration was done under local anaesthesia using an operating microscope. The skin incision included the discharging sinus. The incision was extended down to the periosteum. Exploration was done along the discharging sinus through the mastoid bone using a microdrill. The discharging sinus ended at the foreign body (metallic splinter) located in the postero-superior region of mastoid air cells. The foreign body was removed in toto using a micro-needle and artery forceps. The sigmoid sinus was found exposed by the foreign body. No thrombus was detected in the sigmoid sinus. Cortical mastoidectomy was carried out. Mastoid cavity was washed and incision closed in layers. Post-operatively individual developed clinical features of sigmoid sinus thrombosis viz. intermittent fever with chills and headache. Blood counts and blood culture at this stage revealed no abnormality. He was treated with Inj.Omnatax 1 gm IV 8 hrly, Inj Sodium Penicillin 20 lakh units IV 8 hrly, Inj Cloxacillin 1 gm IV 6 hrly and Inj Flagyl 500 mg IV 8 hrly for seven days. He made an uneventful recovery and was discharged on 21 Nov 98. Check X-ray mastoids showed no foreign body. The pre and post-operative hearing levels of the individual were within normal limits. Follow-up for nine months had shown no recurrence of postaural sinus.

Discussion

Foreign bodies embedded in the tissue following

Fig. 2 : CT scan head showing 21 mm long metallic foreign body in right mastoid exposing the sinus plate.

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mine blast injuries are common. Multiple small foreign bodies are not removed and generally do not cause any complications. However, the possibility of infection and its consequences remain. Hence, the patient should be made aware of this possibility to enable an early diagnosis when complications of foreign bodies do occur. There have been occasional reports of foreign bodies in the mastoid [1-3].

The vital anatomical relations of the mastoid air cells are the middle fossa meninges superiorly, labyrinth medially, facial nerve anteriorly, and sigmoid sinus posteriorly. Possible complications of foreign body mastoid include meningitis, sigmoid sinus thrombosis, mastoiditis, facial nerve paralysis and labyrinthitis. However, our patient was spared of these complications.

Our patient presented with an infected discharging sinus eight years following the entry of the foreign

body in the mastoid. Having exposed the sigmoid sinus, it was a potential source of danger to the individual for developing sigmoid sinus thrombosis, which occurred post-operatively. X-ray examination in such a case is of immense help in detecting radio opaque foreign bodies. A CT scan helps in localizing the foreign body and planning the surgery.

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