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Bilateral otogenic temporal lobe and post-aural abscesses

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Abstract
A rare case of bilateral unsafe CSOM with bilateral post aural and temporal lobe abscesses is reported with a relevant review of literature.

Key words: #Otitis media, suppurative; Abscess; Temporal lobe

Introduction

Chronic suppurative otitis media (CSOM) of the unsafe variety can lead to post-aural abscess and occasionally can also lead to life-threatening complications such as meningitis, or brain abscess. In developing countries the incidence of these complications is still high (Okafor, 1984). Reviewing the world literature we could not find any case of bilateral unsafe CSOM present with bilateral post-aural abscesses with bilateral temporal lobe abscesses.

A case of a patient with such an unusual presentation is reported warranting an early otolaryngological and neurosurgical intervention.

Case report

A 24-year-old female patient presented to the emergency outpatient department of the Postgraduate Institute of Medical Education and Research, Chandigarh, with a history of fever, bilateral ear discharge, bilateral post-aural swellings and headache of three days duration. There was a history of nausea, vomiting and vertigo. The patient had a past history of bilateral intermittent, scanty, offensive discharge and bilateral diminished hearing since childhood. On clinical examination, the patient was febrile with pallor. Pulse rate was 92/min and blood pressure, general physical and systemic examination were within normal limits. Ear examination revealed bilateral post-aural swellings which were tender, fluctuant with erythematous overlying skin. There was sagging of the posterior canal walls of both external auditory canals with mucopurulent, offensive discharge. Nose and throat examination was normal. Neurosurgical opinion was taken which suggested intracranial involvement. Bilateral fundus examination showed papilloedema suggestive of raised intracranial tension. Routine haemogram revealed anaemia (Hb 7.6 gm per cent) with leukocytosis (total count 12,000/mm^3). Bilateral X-ray of mastoids showed lytic cavity suggestive of unsafe CSOM (Figure 1). Computed tomography (CT) scan of the

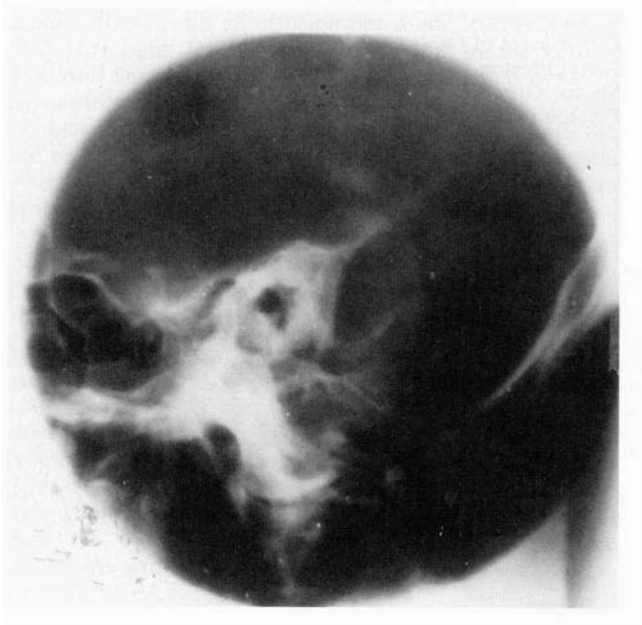

Fig. 1
X-ray mastoids. Law's lateral view, showing some postero-superior erosion.

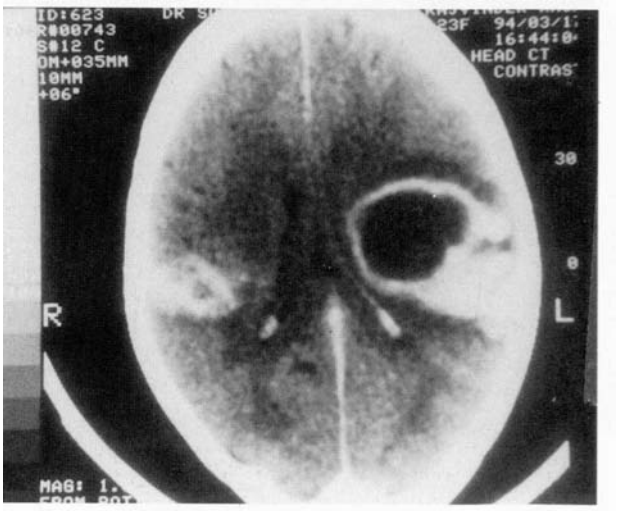

Fig. 2
CT scan showing bilateral temporal lobe abscess.

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brain revealed bilateral temporal lobe abscesses (Figure 2). The patient was started on broad spectrum iv antibiotics (crystalline penicillin chloromycetin + metronidazole) and iv mannitol (to lower the raised intracranial tension). An emergency incision and drainage of bilateral post-aural abscesses was performed. About 10 ml of thick pus was evacuated. Examination under the microscope showed presence of cholesteatoma in the attic in both the ears. The patient received two units of blood and was again referred to the neurosurgical team. She subsequently underwent excision of the temporal lobe abscesses under general anaesthesia. Later a left modified radical mastoidectomy followed by right modified radical mastoidectomy was performed by the post-aural route under general anaesthesia by us after a gap of three weeks. On both sides there were cholesteatoma and granulations with pus in the antrum, aditus and attic. There was destruction of the malleus, incus and supra structure of stapes. There was erosion of dural plates and presence of granulation tissue in both the ears. Sinus plates were intact. The disease was completely removed from both and the facial nerves were intact. Wide conchomeatoplasty was performed. The post-operative period was uneventful.

Discussion

Chronic suppurative otitis media of the unsafe type can lead to intra- and extra-temporal complications. The majority of subperiosteal abscesses follow unsafe CSOM especially in developing countries, while acute otitis media is the usual cause of mastoid abscess in Europe and America (Ibekwe *et al.*, 1988). CT scan is the best radiological investigation to demonstrate osteitis or bone destruction and can indicate intracranial complications. The incidence of complications has been reduced since the advent of antibiotics although complications including life threatening intracranial abscesses are still seen (Browning, 1984). In a study of 73 patients with acquired cholesteatoma, Chalton and Stearns (1984) found that 39 patients (53.4 per cent) had an abnormality in the contralateral ear.

Unilateral post-aural abscess and intra-cranial abscess is occasionally encountered by otologists following unsafe CSOM. Oyarzabel *et al.* (1992) have reported a case of bilateral mastoiditis with subperiosteal abscesses and right lateral sinus thrombosis following acute otitis media.

In our case clinical suspicion and CT of brain helped us to detect the intracranial abscesses. High dose parenteral antibiotics, and timely neurosurgical intervention followed by mastoidectomy of both ears helped us to save the life of the patient.

The probable pathogenesis in this case who presented with subperiosteal abscess following cholesteatoma could be due to blockage of the aditus by the disease process causing obstruction of free flow of pus into the middle ear and external auditory canal. Thus pus collects under tension and extends through the periosteum to present clinically as a subperiosteal abscess. Having similar bilateral presentation in such cases is rare.

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