CASE REPORT

Bilateral Com with Right Sided Sigmoid Sinus Thrombosis and Left Postaural Fistula in A Child

Upasana Saikia[1], Nayana Sarma[2], Nongthombam Bidyananda Singh[3], Manu C B[4]

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ABSTRACT

Chronic suppurative otitis media (COM) is a frequent pediatric condition but can rarely lead to serious intracranial complications. We present a 10yearold male with bilateral ear discharge and hearing loss for four years, along with rightsided headache and neck pain for one year. Examination revealed right attic grade 4 retraction with squamous retraction pocket and pars tensa grade 1 retraction, while the left ear showed attic cholesteatoma, pars tensa grade 4 retraction, and postauricular sinus opening with discharge. The patient was diagnosed with bilateral COM complicated by right sigmoid sinus thrombosis and left postaural fistula. This case emphasizes the importance of early recognition and imaging in preventing severe sequelae.

Keywords: Chronic suppurative otitis media, cholesteatoma, sigmoid sinus thrombosis, postaural fistula, pediatric intracranial complication

INTRODUCTION

Incidence-3-4/million (11) Demography-75% of adult are females, Chronic suppurative otitis media (COM) is a common pediatric condition but can rarely progress to lifethreatening intracranial complications. Among these, sigmoid sinus thrombosis remains one of the most serious, often associated with cholesteatoma and unsafe ear disease. Recent pediatric reports highlight the importance of vigilance in such cases, especially when postaural fistula indicates advanced disease progression.[1-3] This case illustrates the aggressive nature of bilateral COM in a child and emphasizes the role of early imaging and multidisciplinary management.[4-6]

CASE PRESENTATION

A 10 yearold male presented with bilateral ear discharge which was scanty, foul smelling,occasionally blood stained and progressive hearing loss for four years, along with rightsided headache and neck pain for 4 years. Patient also has history of fever which was high grade, intermittent in character associated with chills. The patient was irritable,ill looking,less active than usual and always used to lie down on the bed during the initial 7 days period on the right side. Otoscopic examination revealed right tympanic membrane attic grade 4 retraction with squamous retraction pocket and pars tensa grade 1 retraction, posteriorly bulged and edematous. The left tympanic membrane showed attic cholesteatoma with both anterior and posterior squamous retraction pockets, pars tensa grade 4 retraction, and a sinus opening (1 × 1) cm in the postauricular groove with purulent discharge and radiological findings(Contrast Enhanced Computed Tomography of Brain +Neck + High resolution computed tomography of temporal bone) which includes sclerosis of mastoid cells on the right side with soft tissue attenuation within the right middle ear cavity and mastoid antrum with thinning of tegmen mastoideum, filling defect noted within the right sigmoid sinus and upper part of right IJV. Based on clinical and radiological findings, the diagnosis of bilateral COM complicated by right sigmoid sinus thrombosis and left postaural fistula was established.

Junior Resident[1-3], Senior Resident[2], Assitant Professor[4]
Department of ENT
North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS) Shillong, Meghalaya, India

Corresponding Author: Upasana Saikia
Junior Resident,
Department of ENT
North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS) Shillong, Meghalaya, India

Email ID: Upasanasaikia1996@gmail.com

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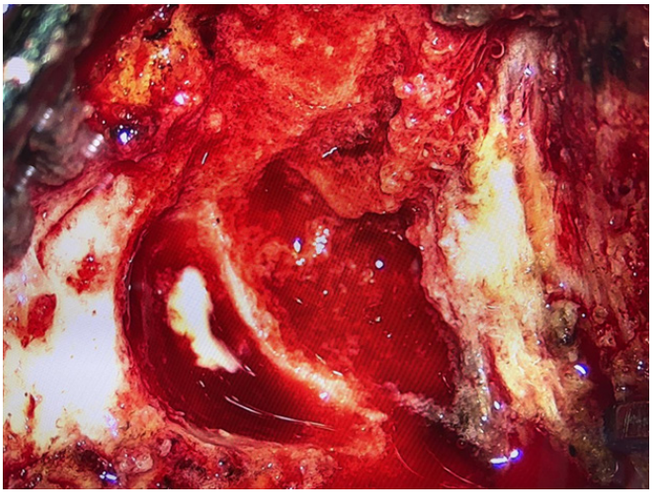
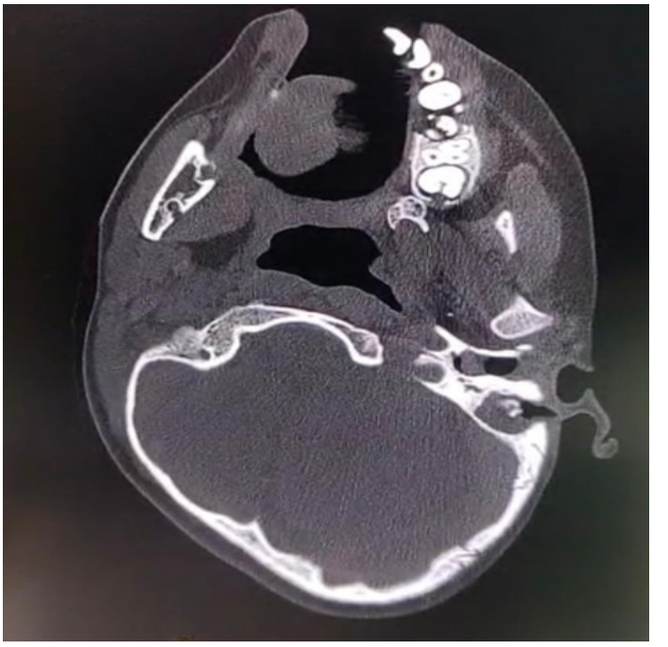
Patient was given conservative management in the due course of time and was operated for Right sided Modified radical mastoidectomy with type 3 tympanoplasty with conchomeatoplasty and intra operative findings noted as Pars Tensa grade I retraction, anteriorly and posteriorly Tympanic membrane is edematous and bulged. Malleus handle eroded, incus body present with incudomalleal and incudostapedial joint dislocated. Stapes covered with granulation and mastoid antrum pus discharge present,cholesteatoma present in epitympanum,tegmen and sigmoid plate. Granulation tissue along the sigmoid plate and sinodural angle seen. Tegmen defect of size 0.5 cm near sinodural angle with pulsatile pus discharge present. Intra operative sample i.e pus from middle ear and cholesteatoma was sent for C/s,G/s. Post operatively patient was seen improved clinically within 7 days. Patient was discharged with conservative management and with ear precautions to follow and subsequently planned for the other side (left sided postaural fistula) for surgery,

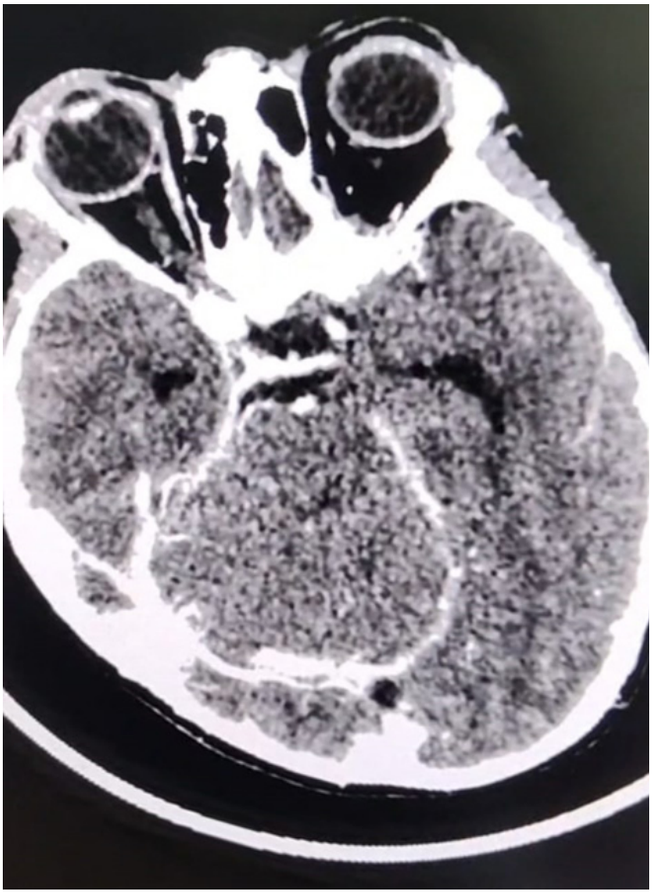


Above images show the intra op findings: pus with discharge coming out from mastoid antrum.



HRCT image(axial cut) showing cortical defect on the left side

HRCT Temporal bone (axial cut) showing right middle ear cavity filled with soft tissue density and no ossicular remnants



CECT Brain (axial cut) showing thrombosed lateral sinus

DISCUSSION

Otogenic sigmoid sinus thrombosis is a rare but well documented complication of COM, particularly in children.[1,2,7] The pathogenesis involves direct spread of infection from the mastoid air cells to the sigmoid sinus, resulting in septic thrombophlebitis and thrombus formation. Cholesteatoma, as seen in our patient, is a major risk factor due to its destructive nature and propensity for bone erosion.[3,8] Clinically, patients may present with persistent otorrhea, headache, fever, or neck pain, though symptoms can be subtle in children.[2,5] In our case, the combination of chronic discharge, hearing loss, and headache raised suspicion for intracranial involvement. Imaging plays a pivotal role: CT and MR venography remain the cornerstone for diagnosing venous sinus thrombosis.[4,9] Early detection is critical, as delayed diagnosis can lead to complications such as meningitis, brain abscess, or dural sinus extension.[10]

Management requires a multidisciplinary approach. Surgical clearance of the primary ear disease is essential, often via mastoidectomy, to eradicate infection and prevent recurrence. Broadspectrum intravenous antibiotics form the cornerstone of therapy, while anticoagulation remains debated but may be considered in selected cases.[5,6] Literature reports favorable outcomes with timely intervention, though morbidity remains significant if diagnosis is delayed.[7,8] Our case reinforces the importance of maintaining a high index of suspicion in pediatric COM with atypical symptoms, as early recognition and intervention can be lifesaving.

CONCLUSION

Bilateral COM complicated by sigmoid sinus thrombosis and postaural fistula is rare in children but represents a serious clinical entity. This case highlights the aggressive nature of cholesteatomatous COM, the importance of imaging in early diagnosis, and the need for prompt multidisciplinary management to prevent catastrophic intracranial sequelae. Clinicians should remain vigilant in children presenting with chronic ear discharge and neurological symptoms, ensuring timely intervention and improved outcomes.

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