Section: SURGICAL CASE REPORT
Abstract: SCR-01

Extradural empyema and sigmoid sinus thrombosis: Complications of acute otitis media in a 12-year-old child

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INTRODUCTION: Acute otitis media (AOM) is common in childhood and usually has a favorable course; however, it may progress to acute mastoiditis with extracranial and intracranial complications. Coalescent mastoiditis involves destruction of mastoid septa and may lead to subperiosteal abscess, venous thrombosis, and intracranial collections, requiring early diagnosis and multidisciplinary management. **CASE REPORT**: A 12-year-old previously healthy girl with recent AOM was hospitalized from 09–12/02/2026 and treated with ceftriaxone followed by amoxicillin until 18/02, with initial improvement. On 04/03/2026, she returned with severe headache, photophobia, right otalgia, and retroauricular swelling and erythema. Computed tomography showed right otomastoiditis, extracranial abscess, and an extra-axial collection compatible with epidural abscess, without ruling out venous thrombosis; cefepime and vancomycin were started. On 07/03/2026, CT angiography revealed complicated tympanomastoid disease with extracranial abscess and subdural empyema. Referred to Hospital Mário Covas, she was admitted on 09/03/2026 and underwent right tympanomastoidectomy the next day, with ventilation tube placement and drainage of retroauricular abscess and purulent subperiosteal temporal and occipital collections. The mastoid showed intense inflammation, extensive bone lysis to the tip, and tissue involving the antrum, middle ear, and ossicles. After removal, exposure of the sigmoid sinus and posterior fossa dura was noted, with purulent drainage. Drilling continued until viable bone was reached. She remained afebrile, without neurological deficits, under broad-spectrum intravenous antibiotics. **DISCUSSION**: This case highlights combined extracranial and intracranial complications of AOM, including extradural empyema. Acute mastoiditis is potentially severe, especially with intracranial extension. Subperiosteal abscess, epidural or subdural empyema, and sigmoid sinus involvement indicate severity and require prompt, integrated management. Correlation of clinical, imaging, and intraoperative findings is essential for therapeutic decisions. Mastoidectomy with drainage and intravenous antibiotics is crucial for infection control and prevention of neurological complications.

KEYWORDS: Acute otitis media; Coalescent mastoiditis; Intracranial complications.

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