

# ASOM with perisinus abscess

N Baisakhiya, A Kale, K Patil

## Citation

N Baisakhiya, A Kale, K Patil. *ASOM with perisinus abscess*. The Internet Journal of Otorhinolaryngology. 2008 Volume 10 Number 2.

## Abstract

Acute suppurative otitis media rarely involve adjacent dura (posterior and middle) and sigmoid sinus. Wide use of antibiotics is the common cause of decrease incidence of these complications. We are reporting this case because of its presentation. She was presented with symptoms and signs of meningismus with minimal ear symptoms and signs. Our message is every patient with fever, headache and previous history of ear discharge should be thoroughly examined to rule out the source of infection and to prevent further complications.

## INTRODUCTION

Acute otitis media (ASOM) is the most common localized infectious process occurring in the first 5 years of life. The clinical course of acute otitis media is usually short, and the process terminates with activation of the host immune system and the proper use of antibiotics. However, a small proportion (1%–18% in different series) of untreated or inadequately treated patients may experience complications. Extension of the infectious process beyond the mastoid system can lead to a variety of intracranial and extracranial complications, including meningitis; epidural, subdural, and intraparenchymal abscesses; vascular thrombosis; osteomyelitis; and abscesses deep within the neck.

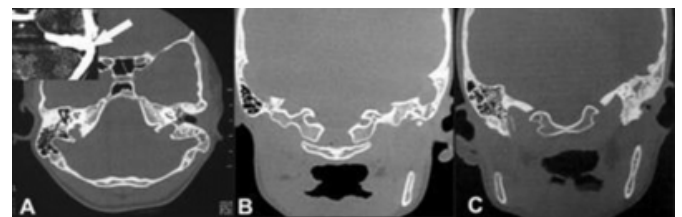
## CASE REPORT

A 12 year female referred to us for mild left ear pain and discharge since 3 days associated with high grade fever and history of vomiting. She was on parental antibiotics since 2 days. There was one episode of generalized convulsion. There was headache of mild degree. There was past history of ear discharge 2 years back. On examination there was no swelling in post aural region, mastoid tip tenderness present on deep palpation. Mucopurulent discharge was present. There was small central perforation with congested rest of the tympanic membrane. Terminal neck stiffness was present.

There was no neurological deficit. Higher functions were normal. CT temporal bone was done which showed left perisinus abscess with destruction of sinus plate (Figure1).

## Figure 1

Figure 1



Cortical mastoidectomy was done. There was destruction of sinus plate with abscess formation and isolated cells were involved in tip region. The rest of the mastoid cavity was normal. Intraoperatively there were no signs of sinus thrombosis (figure2)

**Figure 2**

Figure 2



Blood culture and ear swab were sterile. The patient responded to treatment very well. She became afebrile after 2 days. She is doing well in follow-ups.

**DISCUSSION**

Otitis media in its acute or chronic form is a potentially serious disease which may lead to fatal complications. In its chronic form, complications are usually caused by progressive and relentless erosion of bone thus exposing the risk of damage to the important structures leading to various extra-cranial and intra-cranial complications<sup>2</sup>. In this era of antibiotics and technology incidence of complications are reduced due to awareness of disease, advances in diagnostic and treatment modalities those that do occur cause lot of morbidity and mortality<sup>3</sup>. Acute otitis media manifests clinically in children as otalgia, fever, and erythema or edema of the tympanic membrane at otoscopy<sup>4</sup>.

Inflammation involves the mucoperiosteum of the middle ear and mastoid cells with resulting fluid collections (serous,

mucoid, or purulent). Streptococcus (particularly group A  $\beta$ -hemolytic Streptococcus and Streptococcus pneumoniae) and Haemophilus influenzae account for 65%–80% of bacterial cases. With effective therapy, the inflammatory process can be arrested and the mastoid cells can recover their normal appearance. Middle ear infection extends directly or through the mastoid emissary vein to the sigmoid sinus, resulting initially in perivascular micro abscess and the persistence of the infectious process; the micro abscesses end up involving the venous system, causing an infected thrombus<sup>5</sup>. If pus lying in the posterior fossa medial to the sinus, it is termed an extradural (epidural) abscess, if within the split of dura enclosing the sigmoid sinus it is called a perisinus abscess as in present case(Figure 1A,B). Computed tomography (CT) should be performed early in the course of the disease to classify the mastoiditis and to detect intracranial complications. Magnetic resonance imaging is performed in patients with clinical symptoms or CT findings suggestive of intracranial complications because of its higher sensitivity for detection of extra axial fluid collections and associated vascular problems. On the basis of the clinical features and imaging findings, the disease is managed conservatively with intravenously administered antibiotics or treated with mastoidectomy and drainage plus antibiotic therapy.

**References**

1. Go C, Berstein JM, de Jong AL, Sulek M, Friedman EM. Intracranial complications of acute mastoiditis. *Int J Pediatr Otorhinolaryngol* 2000; 52:143-148.[CrossRef][Medline]
2. H.Ludman. Complications of suppurative otitis media. In:Alen G. Kerr., Editor 6th edition. Scott-Brown's Otolaryngology vol. 3 Butterworth-Heinemann-International edition 1997 pp. 3/12/1-3/12/27.
3. J.Kangsqhark, N.Navacharoen,S.Foanant, K.Ruckphaopunt, Intracranial complications of suppurative otitis media; 13 years experience. *Am. J. Otol.* 1995;16;104-109.
4. Bahadori RS, Schwartz RH, Ziai M. Acute mastoiditis in children: an increase in frequency in Northern Virginia. *Pediatr Infect Dis J* 2000; 19:212-215.[CrossRef][Medline]
5. Bradley DT, Hashisaki GT, Mason JC. Otogenic sigmoid sinus thrombosis: what is the role of anticoagulation? *Laryngoscope* 2002; 112:1726-9.

**Author Information**

**Nitish Baisakhiya**

Assistant Professor, Department of ENT, Datta Meghe Institute of Medical Sciences

**Apoorva Kale**

Junior Resident, Department of Peadiatric, Datta Meghe Institute of Medical Sciences

**Kshitij Patil**

Senior Resident, Department of ENT, Datta Meghe Institute of Medical Sciences