

Complication of suppurative otitis media :-

Whether the preceding disease has acute or chronic spread of infection can follow a number of routes .

1-Extension via bone that has been demineralized during acute infection , resorption by cholesteatoma or osteitis in chronic destructive disease .

2-Infected clot within small veins .

3-Oval or round windows.

4-Fracture temporal bone .

5-After stapedectomy .

6-Via periarteriolar spaces to the white matter of brain .

The development of the complication depend on

1-Patients factors--- age,immunity (DM , Leukaemia).

2-bacterial factors ---- type and virulence of M.O .

3-Treatment efficacy of the underlying middle ear disease .

Classification of the CSOM complication

Intracranial 1-Extra Dural abscess .

2-subdural abscess .

3- Sigmoid sinus thrombophlebitis.

4-Meningitis .

5-Brain abscess .

6-Otitic hydrocephalus .

Complications within the temporal bone :

1-Mastoiditis .

2-Petrositis .

3-Facial paralysis .

4-Labyrinthine infections .

Managements of the intracranial complication of CSOM :-eThe presentation , Diagnosis and treatment of intracranial complication are common to all .

The symptom as 'headach ,malaise , fever and drowsiness' . any of previous symptom should alert the Otologist to the possibility of complication and provoke initiation of investigation and treatment without delay .

The principles of treatment common to all of the intracranial complication :-1-Systemic antibiotic .

2-Identification of local neurological signs .

3-Treatment of ear disease .

Antibiotic therapy : general principles

1-Large dose and IV route .

2-Start treatment without waiting of culture sensitivity test , than change the AB according response of the patient and result of sensitivity test .

3- When the ear infection is acute most probably due to H.Influnsaе the droug of choice is chloromphenicol 100 mg /kg/day , sometime need to combind with gentamecin for G-ive MO , 4-5 mg /kg/day and fallow by s.creatinin level in chronic ear disease .claforan is bactericidal for Beta-lactamase producing cocci and for gram-negative MO , flagyl 400-600 mg/8hr to caver G-ive anaerobic MO .

Identification of local neurological signs by clinical (neurological) examination and investigation as: CT scan ,MRI ,Lumber puncture , EEG .

Treatment of the ear disease :-

Acute otitis media—1-proper antibiotic .

2-Myringotomy .

3-sometime cortical mastiectomy .

Chronic otitis media—Treatment of the ear disease started after control of the intracranial complication except in those

when there is deterioration in the patient state in spite of medical treatment, so need early surgical intervention as radical or modified radical mastoidectomy.

Extracranial complications :-

1-mastoiditis :- Infection of the mastoid bone occurs in two main forms, Acute and chronic, depending on the type of otitis media, age of the patient.

Acute mastoiditis is mostly seen in children as a complication of acute otitis media, but chronic mastoiditis is mostly seen in adult age as a complication of chronic suppurative otitis media (CSOM).

Pathogenesis:

Acute mastoiditis occurs as a result of a large amount of pus formation in the middle ear cleft leading to increased pressure inside the cleft, leading to decalcification and subperiosteal abscess formation.

Chronic mastoiditis occurs after CSOM with or without cholesteatoma, leading to invasion of the bone by granulation tissue or cholesteatoma.

Clinical picture :-

1-recurrent or persistent pain after acute suppurative otitis media (ASOM) resolved.

2- recurrent or persistent fever (ASOM) resolved .

3-Ear discharge after ASOM resolved .

4-persistent deafness .

Signs--- 1-tenderness over mastoid bone .

2-swelling over mastoid bone .

3-sagging of posterior meatal well skin .

4-abnormal drum .

Diagnosis ---1-C.P

2-Radiological = X-ray mastoid .

c.T scan temporal bone .

3-blood exa. =high WBC

High ESR

Treatment ----Acute mastoiditis with subperiosteal abscess regarded as potential surgical emergency , surgical drainage or cortical mastoidectomy .

Labyrinthitis =

The infection may extend to the labyrinth via 1-round window
2-blood vessels 3-surgical or traumatic or pathological fistula .

Pathology= classified to

1-circumscribed labyrinthitis the inflammatory processes outside the endosteal lining of the labyrinth .

2-serous labyrinthitis only few round cells in the perilymph without microorganisms .

3-purulent labyrinthitis pus with microorganisms in the perilymph and endolymph of labyrinth .

4-dead labyrinth It's the later stage , due to obliteration of the labyrinth by granulation tissue or fibrosis then bone formation .

C.P---Patient suffering from acute or chronic middle ear infection , present with violent vertigo and vomiting with severe sensoryneural hearing loss , irritative jerk nystagmus beating toward the infected ear .

The vestibular symptom subside but the hearing loss is permanent .

Treatment=

1-Bed rest .

2-vestibular sedative as stemetil or stugeron .

3-antibiotic as ampicillin with chloromphenicol .

4-surgical treatment as myringotomy or cortical mastoidectomy in acute cases , and mastoid exploration in chronic ear infection .

Petrositis ----(gradingo syndrome)

Facial N. paralysis (Bells palsy)