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Chronic Suppuretive Ottitis media in children and its homoeopathic management

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Abstract
The most common inflammatory condition of the middle ear is acute suppurative otitis media which is extremely common in children, if discharge persists more than six weeks of duration, is due to chronic inflammation of middle ear cavity or chronic suppurative otitis media (CSOM), it is more prevalent in first five years of life. Homoeopathic medicine can manage the case successfully.

Keywords: Chronic, otitis media, children, discharge, homoeopathic medicine

Introduction
Incidence of CSOM is higher in developing countriesbecause of poor socio-economic standards, poor nutrition and lack of health education. In India, the overall prevalence rate is 46 and 16 persons per thousand in rural and urban population respectively. It is also the single most important cause of hearing impairment in rural population.

Definition [1]
Chronic suppurative otitis media (CSOM) is a long-standing infection of a part or whole of the middle ear cleft characterised by ear discharge and a permanent perforation. A perforation becomes permanent when its edges are covered by squamous epithelium and it does not heal spontaneously**.**

Epidemiology [1]
Incidence of CSOM is higher in developing countries because of poor socio-economic standards, poor nutrition and lack of health education. In India, the overall prevalence rate is 46 and 16 persons per thousand in rural and urban population respectively. It is also the single most important cause of hearing impairment in rural population.

Aetiology [2]
1. It is mainly due to recurrent attack of acute otitis media, ascending infections via the Eustachian tube, infections from tonsil, adenoids, and infected sinuses.
2. Allergy due to ingestants such as milk, eggs, fish etc.
3. Bathing and swimming in pools, picking of the ear with infected materials etc.
4. A rare cause of otorrhoea may be CSF leak which is usually post traumatic (clear watery discharge).

Causative Organisms: The most commonly isolated organism is Pseudomonas aeruginosa; other organism includes Staphylococcus aureus, Proteus, E. coli, Aspergillus and Candida**.**

Types of CSOM: [2] CSOM may be divided into active and inactive. Active CSOM is associated with an actively discharging ear, whereas inactive CSOM involves a dry central perforation of the tympanic membrane. Clinically it is divided into two types:-

A) Tubotympanic type: It is also called the safe or benign type and usually found in children. It involves antero-inferior part of the middle ear cleft and associated with central perforation. Episodes of upper respiratory tract infections and entry of water into the middle ear can trigger the discharge. There is no risk of serious complication.

Clinical Features

1. Ear discharge is usually non-offensive, mucoid or mucopurulent, constant or intermittent.
2. Hearing loss is conductive type; its severity varies but rarely exceeds 50 dB
3. Perforation is central, and may lie anterior, posterior or inferior to the handle of malleus.
4. Middle ear mucosa is seen if perforation is large.

B) Attico-antral type: It is unsafe or dangerous type of disease involving posterosuperior of middle ear cleft and is often associated with the presence of cholesteatoma or granulations. Cholesteatoma is the alternative name, which means a cyst or sac of squamous epithelium that is present in the attic part of the middle ear. The exact aetiology of cholesteatoma is unknown, although poor Eustachian tube function is implicated. It has bone-eroding properties and may cause life-threatening complications, such as brain abscess, subdural and extradural abscesses, meningitis, hydrocephalus and encephalitis.

Clinical features: [3]

1. The clinical hallmark of chronic otitis media is purulent aural discharge, usually scanty but always due to bone destruction.
2. Hearing loss which is caused by cholesteatoma may be conductive due to erosion of incus or sensorineural due to direct erosion of the cochlea or migration of toxins into the inner ear.
3. Bleeding may occur from granulation or polyp when cleaning the ear.
4. Perforation is attic or posterosuperior marginal type.
5. Retraction pocket which is invagination of tympanic membrane seen in the attic or posterosuperior area of pars tensa.
6. Pearly white flakes of cholesteatoma can be sucked from the retraction pockets.

Diagnosis of CSOM: [1]

A) By history taking: History taking done to elicit the symptoms of earache, ear discharge, crying of baby when the ear is touched, history of previous ear discharge, accompanied by episodes of colds, sore throat, cough or some other symptoms of upper respiratory tract infection, should raise the suspicion of CSOM. Routine examination of the ears is essential; this should be repeated everytime in children with an upper respiratory tract infection, or in those who are vomiting from any cause. Some infants will pull on the affected pinna and others will shriek from the pain caused by the infection.

B) By otoscopy: Otoscopic examination confirms diagnosis of CSOM and tympanic membrane perforation. Otoscope often reveals the lack of mobility of tympanic membrane which is pathognomic of this condition.

C) Investigations

1. Microscopic examination is essential in every case.
2. Tuning fork tests and audiogram are essential to confirm the degree and type of hearing loss.
3. Mastoids X-ray shows extent of bone destruction and degree of mastoids pneumatisation.
4. Culture and sensitivity of ear discharge is helpful to select proper antibiotic for local or systemic use.

Features which indicating complications in CSOM: [2] If child becomes listless, irritable, refusing to take feeds and easily going to sleep. Pain, vertigo, persistent headache, facial weakness, fever, nausea, vomiting, neck rigidity, diplopia and abscess round the ear; these are raising the suspicion regarding complications.

Complications of CSOM [3]

CSOM becomes complicated when infection spread beyond the bony wall of the middle ear cleft. This spreads of infection have grave consequences owing to intimate relationship of the middle ear with vital structures such as meninges, brain, venous sinuses, facial nerves and labyrinth etc. The most common complication of CSOM is hearing loss, which may affect language development and school performance. Complications of AOM are more common in younger children, while complications of CSOM are more common in older children. Early diagnosis of complications and early management has reduced the mortality rate.

Suppuration in the perisinus cells extend to adjacent Dura, which causes phlebitis and mural thrombus formation thus embolism of septic thrombi may lead to meningitis or intracranial abscess formation.

Complications of CSOM are divided into two main groups.

A) Intracranial: Meningitis (most common complication in both ASOM and CSOM), Epidural abscess, sigmoid sinus thrombosis, Subdural abscess, Brain abscess and Otitic hydrocephalus.

B) Extra cranial: Acute coalescent mastoiditis, Sub periosteal abscess, Facial nerve paralysis and Labyrinthinitis.

Management and Treatment of CSOM

(A) General Management: [6]

Prevention is better than cure- is a truism. Dr. Samuel Hahnemann mentioned regarding social and preventive medicine in § 4, as “He is likewise a preserver of health if he knows the things that deranges health and cause disease and how to remove them from persons in health.” The curing of sick people permanently, gently and quickly is the first and best test of a homoeopathician. General management is mainly based on cleanliness of ears, avoid bathing and swimming in ponds and river, during bathing prevent water to inter in the ears, avoid inserting objects into ears, which may cause injury in ears, provides nutritious food, breast feeding, proper treatment of local causes like tonsillitis, adenoid and upper respiratory tract infections. The strict care should be taken to dry the hair and ear thoroughly after bathing, as neglect in this matter is not an infrequent cause of deafness or other mischief**.**

(B) Medicinal Management

“Variability is the law of life and as no two faces are the same, so no two bodies are alike, and no two individuals react alike and behave alike under the abnormal conditions which we know as disease” -------- William Osler

Ear problems are more common in children, in this age group it is very difficult to take out mental symptoms, so prescription depends mainly on generals, strange, peculiar characteristics symptoms, intrauterine history, past history, family history and causative factors.

Some commonly used medicines in cases of CSOM are as follows:- [4]

1. **Asafoetida:** [4] It is effective for offensive otorrhoea with boring pain in mastoid bone. Mastoid disease with pain in temporal region and pushing out sensation. Offensive, purulent discharge.
2. **Calcarea Carbonica:** [5] Scrofulous inflammation with muco-purulent otorrhoea, and enlarged glands. Eruption on and behind ear, sensitive to cold**.** Tedious cases in scrofulous children.
3. **Causticum:** [4] Ringing, roaring, pulsating with deafness. Words and steps re-echo. Chronic middle ear catarrh. Accumulation of ear wax.
4. **Hepar Sulph:** [4] Scanty, sour and fetid discharge, ear very sensitive to touch, soreness in small spot about the ear. Patient becomes worse at night and cold air**.**
5. **Kali Mur:** [4] The adaptation of this remedy to many catarrhal processes in the later stages is one of the certainties in medicines. My experience with it in chronic catarrhal condition of the middle ear and throat, Eustachian swelling with deafness, fully confirms that of our specialists and general practitioners**.**
6. **Lycopodium:** [5] It is a precious remedy against chronic otitis with purulent discharge**.** Thick yellow offensive discharge inside the ear with tearing pain. Otorrhoea and deafness with or without tinnitus, humming and roaring in ears**.**
7. **Mercurius Dulcis:** [4] Catarrhal affections of mucous membranes, especially of the eyes and ear. Catarrhal inflammation of middle ear, Eustachian tube closed; catarrhal deafness and otorrhoea in psoric children. Has marked effect on catarrhal inflammation of ear, and useful in Eustachian catarrh deafness**.**
8. **Muriatic Acid:** [4] Discharge from ears following scarlatina.
9. **Psorinum:** [4] In chronic suppuration when the symptoms remain unchanged after Sulphur. Very fetid discharge, excessive itching in the ears so that children can hardly be kept from picking or boring in the meatus.
10. **Pulsatilla:** [5] A great ear remedy, profuse, thick, yellowish green discharge from the ear. Pus flow out of the left ear**.** Thin watery discharge and when it follows measles**.** During the period of discharge Pulsatilla and Calcarea Iod are most useful.
11. **Silicea:** [5] Child bores into its ear when asleep, causing a discharge of blood and pus. Child seems to enjoy having the ears cleansed with the cotton probe.it is most useful remedy in involvement of bones**.**A peculiar symptom leading to the remedy is an itching and tingling in the locality of the Eustachian tube.
12. **Sulphur:** [5] Otitis media in psoric patients with a tendency to skin eruptions, after others selected remedies had failed**.** Lancinating pain in the ears, extending to the head or where the discharge of matter has already taken place**.**
13. **Tellurium:** [5] Catarrh of middle ear, discharge acrid, and smell like fish pickles, itching, swelling, throbbing of meatus, deafness. Discharge thin, acrid causing blisters formation, excoriates the meatus and the skin wherever it touches.
14. **Thuja:** [5] Chronicotitis, discharge purulent like a putrid meat. Granulation, condylomyta; Creaking when swallowing. Polypi pale red cellular, bleeding easily. If the disease is complicated with a psoric or syphilitic dyscrasia, other medicines will have to be given beside the above, among these cases the most often coming medicines are- Hep. Sulph, Sulphur, Dulc, Mag. Carb., Borax, Merc, Nit. Acid, Sepia, etc.

Conclusion

Homoeopathy has a good scope in cases of CSOM. In paediatrics case taking importance lies on observation of the physician and thorough clinical examination along with information obtained from the parents. Our prescription is based on totality of symptoms and individualization of the case.

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