Complications of chronic suppurative otitis media – still a menace

Chronic suppurative otitis media (CSOM) is one of the most commonly treated infections in clinical practice today. CSOM is a sequel of acute otitis media (AOM) which is again a common infection in childhood. Most of the cases of AOM do well with antibiotic therapy. In those who fail to receive antibiotic or fail to respond to antibiotic therapy, CSOM results. In pre- antibiotic era, AOM resulted in intratemporal and intracranial complications, now with introduction of antibiotic therapy the incidence of complications has come down. However cases of CSOM still develop these complications even in this era of antibiotic therapy.

CSOM is more commonly seen in low socio-economic groups where there is overcrowding, lack of good personal hygiene and access to medical care is poor.

Global burden of CSOM obtained from various prevalence surveys across the different countries shows that 65-330 million individuals are suffering from the disease. 39-220 million people suffer from hearing impairment caused by the disease.

Ninty percent of the global burden of CSOM is accounted by South East Asia and Western pacific regions, Africa and several ethnic minorities in the Pacific rim.

India and China account for the majority of the global burden. India falls into countries with highest prevalence (prevalence >4%). Earlier studies quoted Indian prevalence as 16-34%. But however recent study conducted in Tamilnadu shows prevalence rate of 7.8%.

Complications of CSOM

CSOM causes various life threatening complications which are the cause for the mortality and morbidity associated with CSOM. Hippocrates (460 BC) noted " acute pain in the ear with continued high fever is to be dreaded for the patient may become delirious and die". Other scholars of pre antibiotic era, Roman physician Celsius (25AD) and Arabian physician Avicenna (950-103 AD) also recognized the complications of CSOM.

Complications of CSOM are broadly classified into intratemporal (Coalescent mastoidoitis, facial nerve palsy, labyrinthitis and petrous apicitis) and intracranial complications (Meningitis, Extradural abscess, Subdural abscess, Brain abscess, Sigmoid sinus thrombosis and Otitic hydrocephalus)

Frequency of the complications changed dramatically with the introduction of antibiotics. With introduction of sulphonamides in 1930s and penicillin in 1940s ten fold reduction in mortality rate was seen.

Meningitis, sigmoid sinus thrombosis and Brain abscess were the most common cause of death in that order. With introduction of antibiotics the reduction in mortality has been greatest for thrombosis of the sigmoid sinus which has nearly disappeared as a cause of death. In our own experience where eleven patients were treated for sigmoid sinus thrombosis there were no deaths.

Unfortunately this decline in complications and mortality is well documented in developed countries. In developing countries rate of complications and mortality from th is still higher. In 1990, 28000 deaths occurred worldwide due to complications of CSOM, but majority of these deaths were from developing countries of South East Asia, and Western pacific area. 1996 world development report estimated 2.163 million disability adjusted life years (DALYS) due to CSOM and its complications. 94% of which comes from developing countries.

India accounted for 12,000 deaths and 6,29,000 DALYS. India and China together accounted for 61% of deaths and 57% of total DALYS.

Causes for high rate of complications

Socio-economic factors- most of the CSOM patients are from low socio-economic status. In these patients there is lack awareness regarding complications of CSOM. Preliminary data from study going on in our own department to assess the level of awareness about complications of CSOM in patients suffering from CSOM shows only 5-6% of patients are aware that CSOM can cause serious compliations, remaining think it to be minor ailment.

Scarce availability of trained ENT surge-ons across the country.

Operative facilities for ear disease available only in urban areas and tertiary care centers.

High cost of treatment.

Poor socio-economic status makes impossible for patients to afford costly treatment.

Primary health care set up as well as doctors cannot handle or treat these patients.

Masking effect of antibiotics used by primary health care doctors in these patients make it difficult for the qualified surgeon to identify the cases.

Hope and Future

Indian government taking into consideration the seriousness of the condition, has started pilot phase of **National programme for prevention and control of deafness** (from 2006-2008) in 25 districts, from 10 states and 1 union territory with a long term objective of reducing disease burden by 25% of the existing burden in eleventh five year plan. It is proposed to expand this programme to include a total of 203 districts covering all the states and union territories of India by 2012. Expansion will be done in a phased manner with inclusion of 45 new districts each year.

Objectives of the Programme

- To prevent avoidable hearing loss.
- Early identification, diagnosis and treatment of ear problems.
- Rehabilitation of deaf individuals.
- To strengthen rehabilitation process.
- To improve facility in institutions for ear care.

In addition to this programmes aiming at creating awareness among the public by making use of different modes like mass media at regular intervals, active participation of non-governmental organizations, free or low cost treatment facilities at various levels of government hospitals should bring down the burden of this menace in our country.

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