Otitis Media with Effusion

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This study was conducted to analyze the variety of pathological processes leading to OME and to assess the results of different treatment modalities. Patients aged between two years and fifty years with hearing difficulty were included in the study. Study showed that males were 1.72 times more affected than females. Nasal obstruction was an associated symptom in 24(20%) patients. All the patients were subjected to detailed history, thorough clinical otolaryngological examination. Every patient was investigated by pure tone audiometery and tympanometry. A total number of 120 patients were studied. 76(63.3%)were male and 44(36.6%)were females. The mean age was 26 years.
Key words: Otitis media with effusion, hearing difficulty.

Fluid in the middle ear collects in a variety of conditions in almost all ranges of age, from early childhood to old age. The condition has been given different names by different authors, depending upon the appearance of the fluid. Recently otitis media with effusion has been accepted as latest name for the condition[7]. Lim et al[8] (1993) suggested the name middle ear effusion for the same.

The study was conducted at E.N.T unit 1 of Mayo Hospital Lahore which is a 1799 bedded teaching hospital affiliated with king Edward medical college from January 2001 to October 2001. All suspected cases of hearing loss and otitis media with effusion were included in the study.

Materials and methods:

The study was conducted on 120 patients aged from two to fifty years. The majority (85%) of cases were outdoor patients who presented for their hearing difficulty and had underwent primary audiological investigation i-e PTA And tympanogram. 15% of the cases were admitted patients who were treated by myringotomy and grommet insertion or were being investigated for other conditions like nasopharyngeal masses.

After taking thorough history, complete otolaryngological examination was done including tuning tuning fork tests with 512 Hz frequency. All the patients above 5 years were investigated with pure tone audiogram by Interacoustic Audiometer. Tympanography was done in all patients and results were obtained in graphical form. Nasopharyngeal soft tissue shadows were assessed by lateral view radiographs. Middle ear pressure, physical volume, acoustic reflexes and compliance gradients were recorded.

Results:

A total number of 120 patients were included in the study. Fourty eight (40%) showed normal tympanic membrane. Rest of the 72 patients(60%) demonstrated type B and type C curves. Fourty patients (33.3%) had bilateral disease while eighty patients (66.6%) had unilateral involvement. Most patients were symptomatic in winter season.

The categorization of symptoms was such that 106 patients (80%) presented with decreased hearing and it remained the main otological symptom. Behavioral symptoms and slurred speech were seen in 5 patients (4%). Nasal obstruction was main nonotological symptom, found in 17 patients (14%). The signs in the tympanic membrane were such that 65 patients (54%) had retracted tympanic membranes. Fluid level was seen in 6 patients (5%) and air bubbles were found in 5 patients (4%).

Impaired mobility of tympanic membrane was seen in 11 patients (9%). Dull tympanic membrane was seen in 60 patients (50%). Throat and nose examination revealed enlarged Adenoids in 25 patients(20.8%), Turbinal hypertrophy in 11 patients (9%), Nasal polyposis in 6 patients (5%) and nasopharyngeal carcinoma in 4 patients (3.3%)

Discussion:

Otitis media with effusion is a common cause of hearing impairment in all parts of the globe. Newacheek P.W et al[1] concluded that one in eight children under 10 years suffer from OME while Jan and Mohibbullah[2] concluded that 1.9% of total deaf children are affected by OME. This study also shows that 5.6% of the school going children had hearing difficulty due to otitis media with effusion. Zaidi et al[3] concluded that higher rates of OME in coastal areas of Sindh and Balochistan and hill areas was due to dusty and stormy weather and high altitude respectively. The eastern Punjab has a moderate weather which is a factor in reducing the incidence of OME. Our study shows that the number of patients presenting with OME was more in the winter. This observation is consistent with the study conducted by Williams et al 1994 on British school children. According to Johnston L C et al[4], the tympanic membrane abnormalities in the cases of OME was found in 82.6% of the cases which were segmental atrophy and tympanosclerosis. We found membrane signs in 72.3% of the cases which were retracted membrane, middle ear fluid with or without air bubbles and reduced membrane mobility. Ravicz M E et al[9] has agreed to our observation that mechanism of hearing loss in OME reduction of admittance of middle ear space due to displacement of air with fluid. Lee D H et al[5] recommended myringotomy as diagnostic tool when there was a poor correlation between otoscopy, otomicroscopy and tympanometric assessments. Therapeutic efficacy of myringotomy has however been

questioned and recommended for only selective cases. In this study we found that 70% cases of OME recovered by conservative measures and only 30% cases needed myringostomy and grommet insertion as a treatment for OME. During the study it was observed that antibiotics alone have a short term relief of symptoms as also concluded by Mandl E M et al[6].

Otitis media with effusion is a manifestation of different pathologies and has to be properly investigated by otoscopy, otomicroscopy , tympanometery and thorough ENT examination. It has to be managed to avoid developemental retardation in children and disastrous consequences in adults as in the cases of nasopharyngeal carcinoma because OME could be the only sign of NPC.

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