

ORIGINAL ARTICLE

Analysis of 84 cases of Otitis Media - A Clinical Study

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ABSTRACT:

Background: AOM is an infection of abrupt onset that usually presents with ear pain. In young children this may result in pulling at the ear, increased crying, and poor sleep. The present study was conducted to record the sign & symptoms in patients with otitis media.

Materials & Methods: The present study included 84 patients with symptoms of otitis media. General symptoms like fever, irritability & Gastrointestinal symptoms & local symptoms of cold, earache, hearing impairment, ear discharge, retro auricular pain, tinnitus, vertigo & facial asymmetry were noted. **Results:** Out of 84 patients, males were 30 and females were 54. The difference was significant (P< 0.01). Age group 20-30 years had maximum patients (males- 10, females- 24) followed by 30-40 years (males- 8, females- 11), 40-50 years (males- 7, females- 8), 50-60 years (males- 3, females- 6) and 60-70 years (males- 2, females- 5). The difference was significant (P< 0.05). Common symptoms such as cold (30), fever (10), earache (66), hearing impairment (22), ear discharge (61), tinnitus (7), restoauricular pain (4), vertigo (2) and facial asymmetry (1). The difference was significant (P <0.05). Common signs such as intact TM (55), bulging TM (20), discharge in external auditory canal (22), congested TM (45), perforated TM (38), deviated nasal septum (33), mastoid tenderness (5) and facial nerve paralysis (2). **Conclusion:** Otitis media is a common ear problem most commonly seen in young adults. Female prevalence was observed. Common symptoms and signs were Ear ache, Ear discharge and DNS.

Key words: Deviated nasal septum, Otitis media, Tinnitus

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INTRODUCTION

Otitis media is a group of inflammatory diseases of the middle ear. The two main types are acute otitis media (AOM) and otitis media with effusion (OME). AOM is an infection of abrupt onset that usually presents with ear pain. In young children this may result in pulling at the ear, increased crying, and poor sleep. Decreased eating and a fever may also be present. Acute Otitis Media is one of the commonest infections of the mucosal lining of middle ear cleft. Adults make up less than 20% of patients presenting with acute otitis media.¹

OME is typically not associated with symptoms. Occasionally a feeling of fullness is described. It is defined as the presence of non-infectious fluid in the middle ear for more than three months. Chronic suppurative otitis media (CSOM) is middle ear inflammation of greater than two weeks that results in episodes of discharge from the ear. It may be a complication of acute otitis media. Pain is rarely present. All three may be associated with hearing loss. The hearing loss in OME, due to its chronic nature, may affect a child's ability to learn.²

The cause of AOM is related to childhood anatomy and immune function. Either bacteria or viruses may be involved. Risk factors include exposure to smoke, use of pacifiers, and attending daycare. It occurs more commonly among Indigenous peoples and those who have Down syndrome. OME frequently occurs following AOM and

may be related to viral upper respiratory infections, irritants such as smoke, or allergies. Looking at the eardrum is important for making the correct diagnosis. Signs of AOM include bulging or a lack of movement of the tympanic membrane from a puff of air. New discharge not related to otitis externa also indicates the diagnosis.³

An integral symptom of acute otitis media is ear pain; other possible symptoms include fever, and irritability (in infants). Since an episode of otitis media is usually precipitated by an upper respiratory tract infection (URTI), there are often accompanying symptoms like a cough and nasal discharge. Discharge from the ear can be caused by acute otitis media with perforation of the ear drum, chronic suppurative otitis media, tympanostomy tube otorrhea, or acute otitis externa. Trauma, such as a basilar skull fracture, can also lead to discharge from the ear due to cerebral spinal drainage from the brain and its covering (meninges).⁴ The present study was conducted to record the sign & symptoms in patients with otitis media.

MATERIALS & METHODS

The present study was conducted in the department of ENT. It included 84 patients with symptoms of otitis media. All were informed regarding the study and written consent was obtained. Ethical clearance was taken from institutional ethical committee.

General information such as name, age, gender etc was noted. The case history and general physical examination was performed. General symptoms like fever, irritability

& Gastrointestinal symptoms & local symptoms of cold, earache, hearing impairment, ear discharge, retro auricular pain, tinnitus, vertigo & facial asymmetry were noted.

Results were tabulated and subjected to statistical analysis using chi- square test. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 84		
Male	Female	P value
30	54	0.01

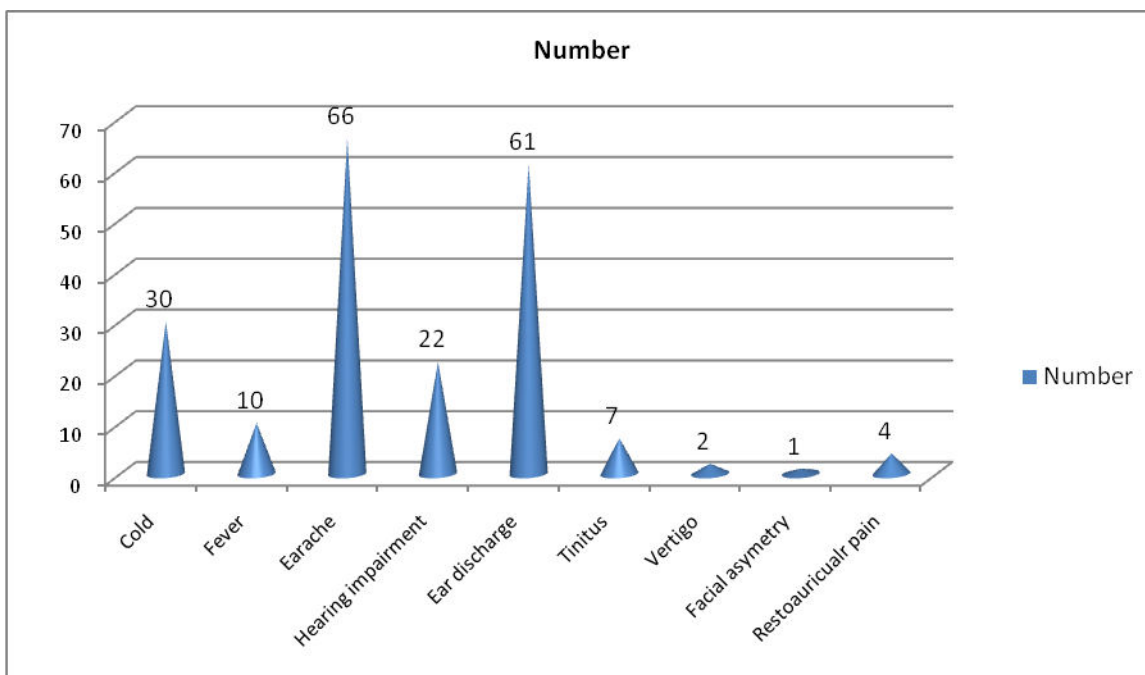
Table I shows that out of 84 patients, males were 30 and females were 54. The difference was significant (P- 0.01).

Table II Age & Gender wise distribution of patients

Age group	Males	Females	P value
20-30	10	24	0.01
30-40	8	11	0.5
40-50	7	8	0.21
50-60	3	6	0.02
60-70	2	5	0.01
Total	30	54	

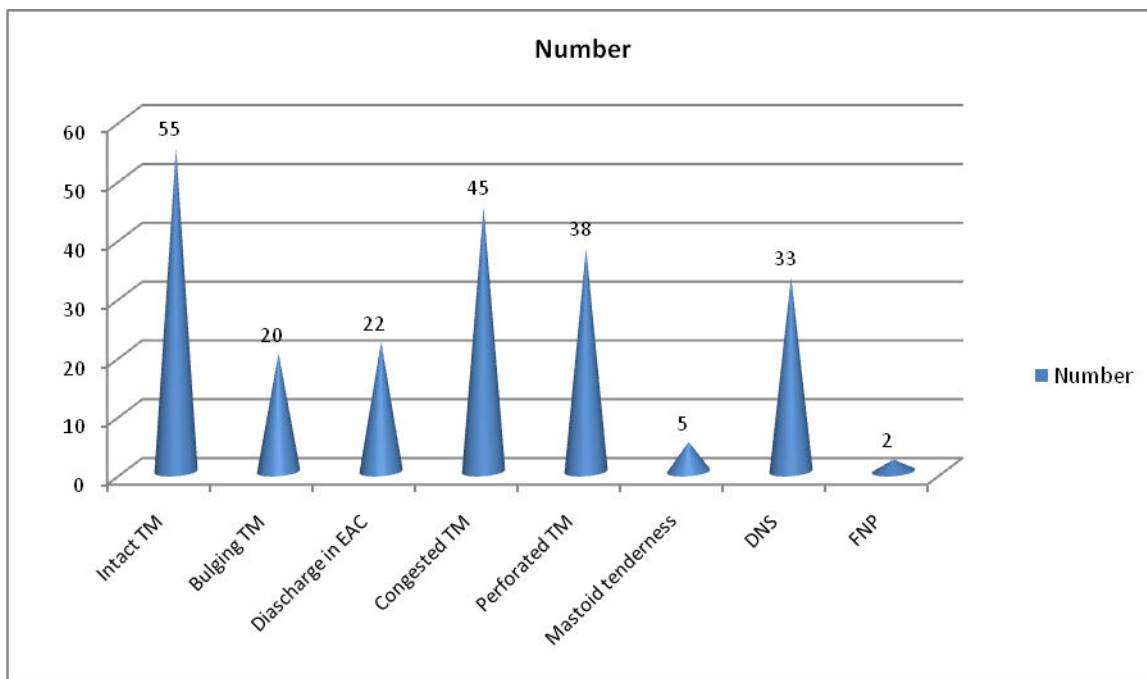
Table II shows that age group 20-30 years had maximum patients (males- 10, females- 24) followed by 30-40 years (males- 8, females- 11), 40-50 years (males- 7, females- 8), 50-60 years (males- 3, females- 6) and 60-70 years (males- 2, females- 5). The difference was significant (P< 0.05).

Graph I Symptoms of otitis media in patients



Graph I shows common symptoms such as cold (30), fever (10), earache (66), hearing impairment (22), ear discharge (61), tinnitus (7), retroauricular pain (4), vertigo (2) and facial asymmetry (1). The difference was significant (P<0.05).

Graph II Signs in patients



Graph II shows common signs such as intact TM (55), bulging TM (20), discharge in external auditory canal (22), congested TM (45), perforated TM (38), deviated nasal septum (33), mastoid tenderness (5) and facial nerve paralysis (2).

DISCUSSION

The common cause of all forms of otitis media is dysfunction of the Eustachian tube. This is usually due to inflammation of the mucous membranes in the nasopharynx, which can be caused by a viral URTI, strep throat, or possibly by allergies. Because of the dysfunction of the Eustachian tube, the gas volume in the middle ear is trapped and parts of it are slowly absorbed by the surrounding tissues, leading to negative pressure in the middle ear. Eventually, the negative middle-ear pressure can reach a point where fluid from the surrounding tissues is sucked into the middle ear's cavity (tympanic cavity), causing a middle-ear effusion. This is seen as a progression from a Type A tympanogram to a Type C to a Type B tympanogram.⁵

By reflux or aspiration of unwanted secretions from the nasopharynx into the normally sterile middle-ear space, the fluid may then become infected — usually with bacteria. The virus that caused the initial URI can itself be identified as the pathogen causing the infection.

In present study we included 84 patients of both gender with signs and symptoms of otitis media. We observed that age group 20-30 years had maximum patients followed by 30-40 years, 40-50 years, 50-60 years and 60-70 years. This is in agreement with Van et al.⁶

We found that common symptoms seen in patients were cold, fever, earache, hearing impairment, ear discharge, tinnitus, retroauricular pain, vertigo and facial asymmetry.

Ear ache and ear discharge was mostly seen in patients. This is similar to Pukander et al.⁷

Common signs found in our study were intact TM, bulging TM, discharge in external auditory canal, congested TM, perforated TM, deviated nasal septum (DNS), mastoid tenderness and facial nerve paralysis. Rea et al⁸ in their study found deviated nasal septum as major sign in their patients.

As its typical symptoms overlap with other conditions, such as acute external otitis, clinical history alone is not sufficient to predict whether acute otitis media is present; it has to be complemented by visualization of the tympanic membrane. Examiners use a pneumatic otoscope with a rubber bulb attached to assess the mobility of the tympanic membrane.⁹

CONCLUSION

Otitis media is a common ear problem most commonly seen in young adults. Female prevalence was observed. Common symptoms and signs were Ear ache, Ear discharge and DNS. Early diagnosis is required for better care.

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