

## A Study on Otitis Externa in A Rural Based Medical College and Hospital

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### **Abstract:**

**Objectives :** To analyze the demographic and clinical aspects of otitis externa.

**Materials and Methods:** Retrospective study over a period of 2 years (January, 2014 to December, 2015), 3258 patients with external otitis were managed in the department of ENT, Burdwan Medical College & Hospital, Burdwan. **Results:** Otitis Externa commonly occurs in the age group from 21 to 30 years (22.52%) with a male predominance. Common ways of presentations are Itching (90.6%), Ear discharge (81%) and earache (67%) and tragal tenderness (83.6%). *Pseudomonas aeruginosa* (58%) is the commonest pathogenic organism isolated. **Conclusion :** External otitis is a common public health problem that is often neglected by people and should be treated at the earliest, otherwise will lead to affect the quality of life.

**Keywords:** Otitis externa, External otitis, *Pseudomonas aeruginosa*

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### **I. Introduction**

Otitis externa is a very common clinical condition in day to day practice in otolaryngology. It is a disease of the skin of external auditory canal characterized by oedema and erythema associated with ear discharge and discomfort. Few patients present with recurrent attacks of otitis externa and it hampers the quality of life of the patients. It involves patients of all age groups [1].

### **II. Materials And Methods**

This retrospective study was done in the department of ENT, Burdwan Medical College, Burdwan, a tertiary care hospital in rural based West Bengal. This study was carried out during the period from January, 2014 to december, 2015. All patients who presented to our ENT OPD with clinical diagnosis of external otitis during the above mentioned period were included in our study. A total no of 3258 patients were involved in this study. A detailed history was taken followed by meticulous clinical examination was done to evaluate the patients. Data received from this study was evaluated carefully to assess the presentation of external otitis.

### **III. Result**

In our study, out of 3258 patients, 2143 patients (66%) were male and 1115 patients (34%) were female [Chart -1]. Maximum patients fall within the age group between 11-30 years and among them the most common age group of presentation was 3<sup>rd</sup> decade – 734 patients (22.53%) [Table -1]. Itching (90.6%), Ear discharge (81%) and earache (67%) are the commonest way of presentation and Tragal tenderness (83.6%) is the commonest examination finding [Table -2]. *Pseudomonas aeruginosa* (58%) is the commonest pathogenic organism isolated from the external ear [Table -3].

### **IV. Discussion**

Otitis externa (OE) is an inflammation or infection of the external auditory canal (EAC), the auricle, or both [2]. This conditions have been reported to be found in all age groups [1]. It is a common disease condition affecting 5-20% of all patients attending otolaryngology clinic [3]. The male to female ratio was 1.9:1, however some studies found female preponderance [1]. Any condition that disturb the lipid/acid balance of the ear will predispose an individual to otitis externa [4].

There are so many important predisposing factors that are associated with this pathology like anatomical variations, Dermatological conditions, allergy, physiological changes, Traumatic and microbiological factors etc. It usually presents with earache, itching, aural fullness, discharge from ear etc. Pain increases while chewing. Some times it is associated with impacted wax or otomycosis. Ear canal is oedematous, congested in patients with otitis externa. Tragus will be extremely tender when pushed and also pinna when pulled.

Treatment of otitis externa is dependent on a thorough understanding of anatomy and physiology of the external ear canal, knowledge of the microbiology of potential pathogens, and familiarity with clinical presentation, so that an accurate and timely diagnosis can be reached [2]. Infection causes the vast majority of

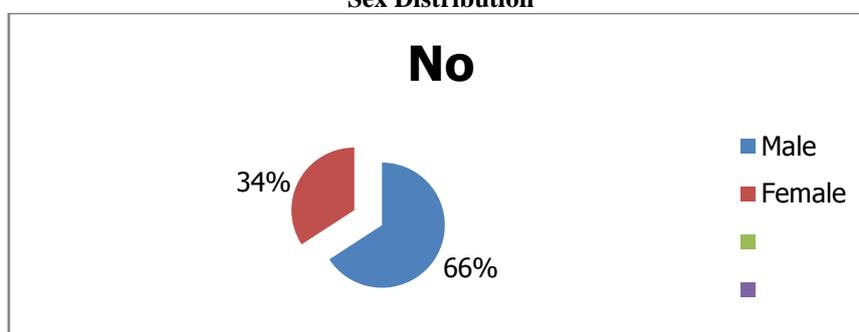
AOE cases. The two most commonly isolated organisms are *Pseudomonas aeruginosa* and *Staphylococcus aureus*[5]. The isolates may be polymicrobial in a significant number. Other Gram-negative bacteria are less common. In rare cases, *Aspergillus* species and *Candida* species were also isolated [6]. In patients who are immunodeficient or who have insulin-dependent diabetes, malignant otitis externa should be ruled out. Mild forms of the disease responds to topical medication. Glycerol/Icthyol (90:10%) is commonly used with an wick pack in external auditory canal which has proven dehydrating and anti-inflammatory properties and anti-bacterial activity against streptococci and staphylococcus, but poor activity against *Pseudomonas* [7,8] . In severe cases, success can be achieved with systemic acetaminophen, nonsteroidal anti-inflammatory medications or oral opioid preparations etc. No complications noted in this study.

## V. Tables

**Table – 1**  
**Age Distribution**

| Age group | Male | Female | Total (%)   |
|-----------|------|--------|-------------|
| 0-10      | 223  | 118    | 341 (10.4%) |
| 11-20     | 378  | 194    | 572(17.55%) |
| 21-30     | 587  | 147    | 734(22.52%) |
| 31-40     | 289  | 144    | 433(13.29%) |
| 41-50     | 267  | 284    | 551(16.92%) |
| 51-60     | 251  | 93     | 344(10.55%) |
| >61       | 149  | 134    | 283(8.68%)  |
| Total     | 2144 | 1114   | 3258        |

**Chart – 1**  
**Sex Distribution**



**Table – 2**  
**Distribution of clinical presentation**

| Clinical presentation | Male | Female | Total (%)    |
|-----------------------|------|--------|--------------|
| Earache               | 1348 | 835    | 2183 (67%)   |
| Ear discharge         | 1753 | 889    | 2642 (81%)   |
| Itching               | 2041 | 912    | 2953 (90.6%) |
| Aural fullness        | 970  | 564    | 1534 (47%)   |
| Impacted wax          | 531  | 296    | 827 (25.3%)  |
| Oedema                | 1870 | 723    | 2593 (79.5%) |
| Tragal tenderness     | 1463 | 1261   | 2724 (83.6%) |
| Foreign body          | 167  | 84     | 251 (7.7%)   |

**Table – 3**  
**Distribution of pathogenic organism**

| Name of the organism          | No. of cases | Percentage (%) |
|-------------------------------|--------------|----------------|
| <i>Pseudomonas aeruginosa</i> | 1889         | 58%            |
| <i>Staphylococcus</i>         | 684          | 21%            |
| <i>Streptococcus</i>          | 457          | 14%            |
| Others                        | 228          | 7%             |

## VI. Conclusion

Otitis externa is very common and contributes significantly to the workload of ENT out patient department. Majority of patients present with earache, ear discharge and oedematous external auditory canal. Most of them can be managed with topical agents with or without systemic medications. Complications are rare.

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