



## Ear Foreign Body: An Observational Study

Authors

**Pankaj Chauhan<sup>1</sup>, Rita Khanoria<sup>2\*</sup>**

<sup>1</sup>MS Otorhinolaryngology, Regional Hospital, Kullu, H.P., India

<sup>2</sup>MD Anaesthesia, Regional Hospital, Kullu, Himachal Pradesh, India

\*Corresponding Author

**Rita Khanoria**

MD Anaesthesia, Regional Hospital, Kullu, Himachal Pradesh, India

### Abstract

*Ear foreign body is a common ENT emergency worldwide. Prompt and appropriate management can reduce the morbidity. A prospective observational study of 40 cases foreign body in the ear was done in Regional Hospital Kullu, Himachal Pradesh, India w.e.f. July 2019 to June 2020, to evaluate the nature, mode of presentation, technique of removal and outcome of it. The result showed that children up to 15 year age group were mostly affected (65%), among them highest incidence were in 5-10 year age group (30%) with male to female ratio 1:1.28. The most common foreign body was the seeds of various vegetables (27.5%) followed by plastic beads (20%) and cotton bud (17.5%), the right ear affected more (54%). Key to successful outcome are prompt help by ENT Surgeon.*

**Keywords:** Foreign body, Technique, Seeds, Ear.

### Introduction

Ear foreign body is one of the common ENT emergencies. Ear foreign body is commonly seen in children then adult. If not managed properly it has high potential for morbidity, mortality and huge cost of management<sup>1-3</sup>. An adult becomes victim while cleaning ear to remove wax or pain and irritation by a cotton bud, match stick or any other objects leaving a part of it behind.

Ear foreign body can be classified in many ways like organic / inorganic, animate / inanimate, metallic / non-metallic, hygroscopic / non-hygroscopic, regular / irregular, soft / hard according to their nature. Vegetable foreign body tends to swell up and get tightly impacted in ear canal or may even suppurate. Among animates

flying and crawling insects like cockroach, ant, mite, tick are common causing intense irritation and pain. Maggots are found in foul smelling discharging ear where flies are attracted to this and lay eggs which hatch out into larvae called maggot<sup>4</sup>.

### Materials and Methods

A prospective observational study of 40 cases foreign body in the ear was done in Regional Hospital Kullu, Himachal Pradesh, India w.e.f. July 2019 to June 2020. All patients' with foreign body entry into the ear were included. Patients with complications arising out of ear foreign body whose removal was done at a different center were excluded. Most of the ear foreign bodies were removed in outpatient department or emergency department by Jobson-Horne probe, crocodile

forcep, and syringing or sucker machine under direct vision with head light illumination. General anesthesia required for deeply placed, hard to remove ear foreign body and non-cooperative patients,. Data were collected including age & sex of patient, date, time & mode of presentation, otoscopic findings, nature of foreign body, time between insertion & presentation, mode of treatment, result & complication were noted and statistical analysis was done.

### Results

Peoples of all ages are affected. Children's of under 15 year age group are mostly affected (65%). Among this high incidence (30%) was observed in 5-10 year age group. Male to female ratio was 1:1.28. The most common foreign body was seeds of various vegetables (27.5%), beads of various origin second most common (20%) followed by cotton bud (17.5%). Other included were insects (16.43%), rubber, feather, grass, stone and clay/mud constitute for 12.16%, match stick / tissue paper (6.41%).

Patients (47.5%) presented with history of insertion of a foreign body in ear. Other presenting features were foreign body sensation (18.57%), aural discharge (12.16%), irritation/pain (10.13%), deafness (7.11%), and ear bleeding (4.06%).56.16% patients attended for treatment within 24 hours of insertion. Others included as 22.60% within 1-7 days, 10.25% within 7-15 days, 6.40% within 15-30 days, 4.59% patients couldn't say the exact time of insertion. Most of (92.89%) ear foreign bodies were removed in OPD, by Jobson-horne probe and crocodile forceps (65%), suction (20%) and syringing (15%). General anesthesia was required in 7.5% cases.

### Discussion

In this study we found 0-15 year age group peoples are mostly affected. In our study it is 65% which is supported by Al-Juboori AN<sup>7</sup> where it was 57%. & Parajuli R<sup>10</sup> where it was 45%, less than 10 year age group. On the other hand Mukara BK et al<sup>8</sup> found 2-8 year age group is 78.4%. However, this is mainly

due to busy and occupied mothers have led to a higher incidence of children not being monitored as close as required. We observed that the incidence is inversely proportional to the age of the patient. Vegetable seeds are most common ear foreign body encountering in this study as 27.5% while beads of various origins including toy were second most common as 20%.

Unilateral ear foreign body more frequently affect the right ear than left ear due to preference of right handed individual to insert objects in their right ear. Most of our patients (47.5%) presented with the history of insertion of a foreign body into the ear. This was noticed either by patients himself or parents and they had no symptoms. This result is consistent with the study of Moorthy PNS et al<sup>5</sup> (52%) & Oreh AC et al<sup>9</sup> (56%).

In 56.16% cases patient attended for treatment within 24 hours of insertion. Similar result also found in the study by Ogunleye AOA et al<sup>6</sup> (54.5%), The cause of early presentation may be that parents become worried when their children insert a foreign body in the ear. Another cause of early presentation, seeds are likely to produce ear canal obstruction, discharge, mucosal erosion, ulceration due to its hygroscopic nature within short time. The cause of delayed presentation may be that some foreign body remain in ear canal for long time asymptotically, those are inert in nature. Though uncommon among the living foreign body flying & crawling insect make patient restless to seek urgent management as they cause severe pain, irritation & great discomfort. Most of ear foreign bodies 37 (92.5%) were removed in office setting, by aural forcep or Jobson-Horne probe (65%), by sucker machine (20%) and by syringing (15%). 7.5% ear foreign bodies were removed under general anesthesia. Most of the foreign bodies (65%) were removed by forcep which is almost same to the other studies i.e. Ologe FE et al<sup>3</sup> and Mukara BK et al<sup>8</sup> showed it as 73% & 63.5% respectively. In our study we found that 3 (7.5%) cases had complication. During removal of ear foreign body we found 2 cases had lacerated injury in canal wall and 1 case had perforation of tympanic membrane.

**Conclusion**

Despite a high proportion of cases managed in the office setting, complication rates were within acceptable level. Successful outcome depends on the management by the ENT surgeon. So, if possible it's better to manage ear foreign body by an expert i.e. ENT surgeon, to avoid complications.

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