

# Long-standing foreign body in the external auditory canal – case report

## Długotrwałe zalegające ciało obce w przewodzie słuchowym zewnętrznym – opis przypadku

### Authors' Contribution:

A – Study Design  
B – Data Collection  
C – Statistical Analysis  
D – Manuscript Preparation  
E – Literature Search  
F – Funds Collection

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### ABSTRACT:

**Introduction:** Foreign bodies of the external auditory canal are common pathology in otolaryngological practice. Complaints that accompany this pathology depends on the nature of the foreign body and the time of retention. Because of the potential for serious complications to this seemingly prosaic pathology, reacting as quickly as possible is crucial.

**Case report:** Below we describe an example of a long-standing foreign body in the external auditory canal, we present ways of dealing with the problem and potential complications that may be associated with it.

### KEYWORDS:

external auditory canal, foreign body

### STRESZCZENIE:

**Wstęp:** Ciała obce przewodu słuchowego zewnętrznego są częstą patologią w praktyce otolaryngologicznej. Towarzyszące jej dolegliwości zależą od: charakteru ciała obcego oraz czasu jego zalegania. Z uwagi na możliwość wystąpienia poważnych powikłań tej pozornie prozaicznej patologii, kluczowa jest jak najszybsza reakcja otolaryngologa.

**Opis przypadku:** W niniejszej pracy: opisujemy przykład długotrwałe zalegającego ciała obcego w przewodzie słuchowym zewnętrznym, prezentujemy sposoby diagnostyki i leczenia oraz potencjalne powikłania mogące się z nim wiązać.

**SŁOWA KLUCZOWE:** ciało obce, przewód słuchowy zewnętrzny

## INTRODUCTION

Foreign bodies localized in the external auditory canal are a common pathology encountered by children's otolaryngologists in everyday practice, but on a larger scale (smaller) this problem also applies to adults. In pediatric wards, we can clearly see two peaks of increased occurrence of this pathology: in the age ranges 3–6 and 17–18 [1]. The largest group amongst adults is by far constituted by the elderly (75–79 years of age) [2]. The mechanisms of a foreign body entering into the external auditory canal usually vary across age groups of patients. While in children, we could speak of an independent, often unconscious placement of an object in the ear (speak of an unconscious placement of an object in the ear by child themselves), insofar this pathology in adults stems rather from abnormal ear hygiene or random events. In each case, a proper conduct consists in the quickest possible removal of a foreign body and management of possible complications.

During examination, particular attention should be drawn to the ailments reported by the patient, such as: sensation of a foreign body

in the ear, hearing loss, pressure, soreness, bleeding, and in the case of prolonged retention: swelling in the ear canal and discharge – the effects of locally increasing inflammation. Furthermore, conditions may correlate with the nature of the foreign body (insects, plant elements – swelling, metal elements, with sharp edges, etc.). It is astonishing to note that, according to Nakao et al., exactly half of the patients in whom the foreign body was found in the external auditory canal, were not aware of its presence [2].

## CASE REPORT

Considering the rapidly growing ailments described above, from the placement of a foreign body in the ear canal to its removal there often pass hours, days, less often weeks. In the case of the described patient, this time was extended to about 15 years.

A 27-year-old man reported to the Clinic of Otolaryngology, Head and Neck Surgery of the Medical University of Warsaw, stating that a plastic ball used as a bullet in a toy weapon had entered his

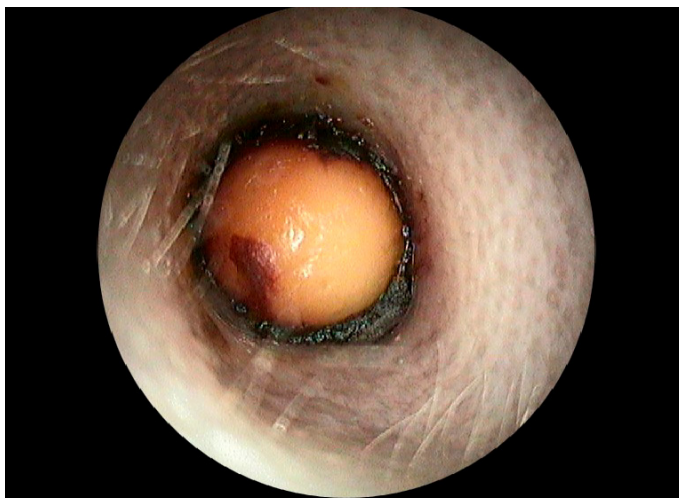


Fig. 1. Otoscopic image – right ear.

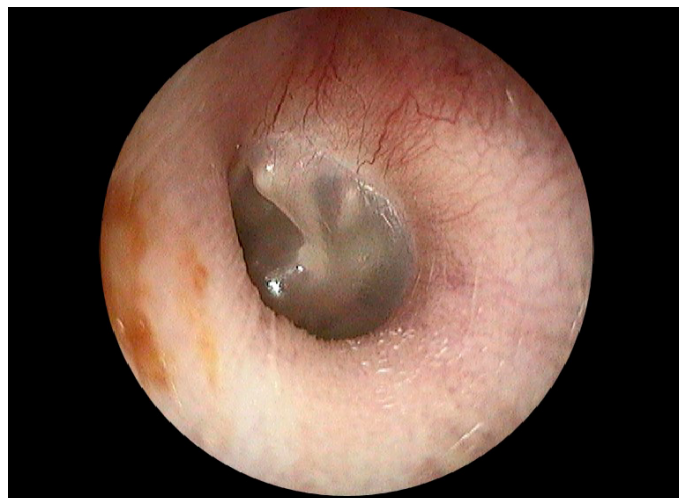


Fig. 2. Otoscopic image – left ear.

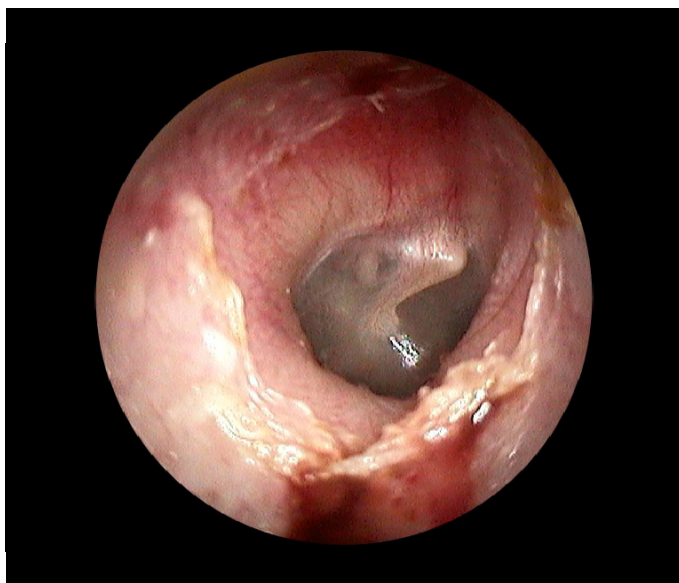


Fig. 3. Otoscopic image – right ear – status after removal of a foreign body.

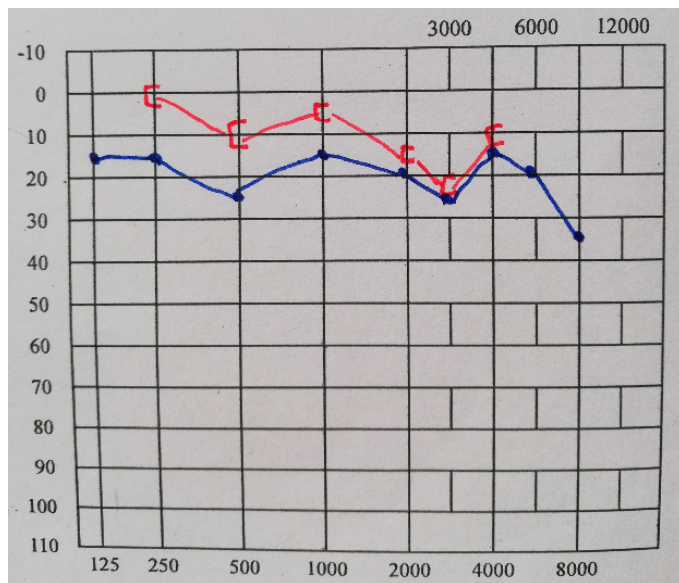


Fig. 4. Tone audiometry – right ear.

right ear canal at the age of 12. The patient, presumably for fear of criticism, did not report this fact to his parents, and very minor ailments that were associated with it put off guard the doctors and himself for many years. The only ailment which he observed was slight hearing loss that remained stable. From the patient's report, the foreign body shifted slightly in the proximal direction of the external auditory canal probably as a result of attempts to self-clean the ear. The patient negated: pain, otorrhea, dizziness. He reported that with time, he had gotten used to the feeling of clogged ear and impaired hearing so much that it did not hinder his day-to-day functioning.

Microscopic examination of the ear revealed the presence of a foreign body blocked in the external auditory canal with smooth outlines, surrounded by compact ceruminous discharge. Tonal audiometry was performed in outpatient settings, which revealed mild conductive hearing loss in the right ear. After local anesthesia of the skin of the auditory canal with a 10% solution of lidocaine spray, an effective attempt was made to remove the foreign body

in a treatment room. First, the foreign body and earwax mass were activated with a suction pump, then – using a blunt ear hook – it was extracted outside.

Follow-up microscopic examination revealed a ring of inflamed epidermis with a break in its continuity at the foreign body adherence site, and a normal skin fragment on the proximal segment to the change (inflammation). A normal, preserved, translucent tympanic membrane was also found. Following this was placement of a dressing in the form of a filter with 0.5% neomycin in the external auditory canal.

## DISCUSSION

Determining the presence of a foreign body in the external auditory canal is always an indication of making an attempt of its removal in the outpatient or otolaryngological office of the Hospital Emergency Department. Due to the risk of complications,

evacuation of a foreign body by flushing should not be attempted. A more reasonable solution appears to be the use of otologic tools, such as suction pump, blunt hook or forceps. The tool should be adapted to the nature of the foreign body and its shape as well as the expected cohesion. When removing hard, round foreign bodies, the use of forceps or tweezers should be avoided – this could result in the foreign body shifting closer to the membrane and the patient being unnecessarily traumatized. An effective solution described by some authors for removing foreign bodies of a battery nature are magnetic tools [3, 4]. Pride et al. [5] reported cases of successful attempts to remove foreign bodies using cyanoacrylate (Super Glue) applied to a cotton pad placed on a blunt tool. In the vast majority of cases, the foreign body can be removed in an outpatient setting, but it is not uncommon that anatomical conditions, complications or lack of cooperation on the part of the patient require surgery under general anesthesia. According to Thompson et al. [6], this applies to even around 6% of cases.

Complications can be divided into: (1) resulting from the prolonged presence of a foreign body in the ear canal; and (2) iatrogenic.

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