

Case Report

Centipede inside ear: utility of video otoscopy

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ABSTRACT

Patients with ear related symptoms constitute a considerable group visiting primary health centres. Video otoscope is an upgraded version of traditional otoscope equipped with features that make it suitable for use among primary care physicians in diagnosing the diseases of ear and in removal of foreign bodies from ear. A 5-year-old child presented with sudden onset left ear pain and itching that woke her up from sleep. Examination with a video otoscope revealed a non-motile insect-like foreign body in the external auditory meatus. Upon proper removal under the guidance of video otoscopy, it was found to be a centipede mingled with cerumen. Contra lateral ear was also cleared of impacted cerumen. Patient's ear ache and sense of ear blockage resolved and patient continued to be symptom free on follow-up. Video otoscopy is a useful technique and its introduction in primary care settings may lead to a better management of patients with ear related complaints.

Keywords: Centipede, Foreign body, Otoscope, Primary care, Primary health centre

INTRODUCTION

Primary care physicians routinely have to deal with patients presenting with aural complaints. Foreign bodies in ear make a good chunk of such cases at primary health centres, particularly among pediatric age group.¹ Clinical examination in patients with any ear related symptoms involves the use of an otoscope. With advances in technology, many medical instruments have undergone upgrades, including the traditional otoscope. Video otoscope (VO) is equipped with several useful features which make it better suited for diagnosing ear related pathologies than its conventional counterpart.² An increasing interest is being shown by general practitioners regarding use of VO.³ VO finds particular utility in removal of foreign bodies from ear, by allowing attachment of a small scoop/spatula to its tip and visualizing the process of removal in real time. For successful management of aural foreign bodies, it is important that the clinician should possess basic medical knowledge regarding such cases. Moreover, the availability of appropriate equipment, patient cooperation

and proper technique of removal are all essential for a good outcome. Here the author reports a case demonstrating the utility of VO in detection of a centipede in ear of a pediatric patient and its successful removal.

CASE REPORT

A 5-year-old girl child presented with complaints of sudden onset left ear ache and itching sensation that awakened her from sleep about an hour ago. There was no history of fever, vomiting, ear discharge or antecedent upper respiratory tract infection. Mother of the child instilled mustard oil in her ear to relieve the ache. However, the ear discomfort and sense of ear blockade persisted, so her parents brought her to primary health centre (PHC). The child had normal vitals. Pinna and visible part of external auditory meatus appeared unremarkable. After earning the trust of child, making her feel comfortable and reassuring the parents, VO was gently inserted inside the ear canal. The visuals from inside which were streamed live and wirelessly onto the screen of an iPad, revealed part of an insect-like foreign body

deep in the ear canal (Figure 1). The skin of ear canal and the insect were smeared with mustard oil instilled earlier by the mother. Tympanic membrane could not be visualized due to obstructed view. The insect was showing no active motility. Using the small spatula attached to the tip of VO, the whole insect was carefully removed with success in one go. Once outside, examination revealed it to be a centipede, dark brown in color and about 3.5 cm in length. Attached to it, large amount of cerumen (Figure 1) also came out simultaneously, which had hampered the centipede from entering further into the canal and from possibly damaging the tympanic membrane. Apparently the centipede was caught-up within the cerumen on entering the ear canal and was afterwards likely killed by mustard oil. Re-examination after removal of centipede showed a normal tympanic membrane with slightly hyperemic skin in bony part of canal. Patient reported a relief in all her ear symptoms. Examination of contralateral ear showed cerumen filling and nearly occluding the ear canal (Figure 1). Same was removed under VO guidance. Tympanic membrane was normal in appearance. Patient was prescribed topical antibiotic/analgesic ear drops for few days for left ear. She continued to be free of any aural or systemic symptoms on follow up visit after 5 days, with a normal ear examination.

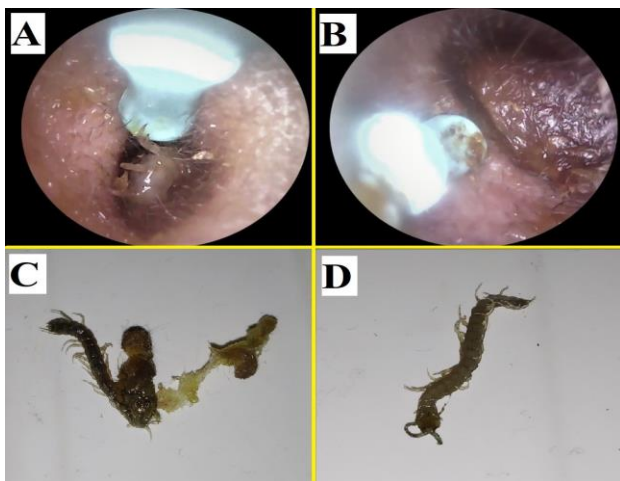


Figure 1: (A) Centipede partially visualized in left external auditory meatus (blue spatula of video otoscope can also be seen), (B) cerumen filling right external auditory meatus, (C) centipede mingled with cerumen from left ear after successful removal, and (D) centipede after separating from cerumen.

DISCUSSION

PHC constitutes a basic unit and bedrock of health care system in India. It assumes special importance in remote rural areas where the population may have no other place to visit for health related needs. Being the first point of contact between people and health care, PHC receives patients belonging to all sub-specialties of medicine, including otorhinolaryngology. Otoscopy forms an essential part of clinical examination in patients with ear

related complaints like ear ache, ear discharge and hearing loss.

The author used a commercially available VO. It easily fits in one hand of clinician and roughly resembles a pen in shape and size. Its tip has a light emitting diode (LED) flashlight that brightly illuminates the examination field and a high definition camera that provides clear zoomed-in visuals. A small silicone scoop/spatula can be attached to the tip for dealing with impacted cerumen and foreign bodies. The device is easy to clean and disinfect between sessions. It is wireless and has wi-fi connectivity with smartphones and tablets (author used an iPad) to project the visuals during examination and to store the visuals for further viewing. Unlike conventional otoscopy, the examining clinician needs not bring his/her face in close proximity of patient's face. Additionally, more than one clinician can watch the procedure on screen. If needed, the visuals captured in far flung rural areas can be shared with otorhinolaryngologists via tele-health programmes or can be used for teaching and educational purposes.^{4,5} The stored visuals can also be used for following the patients' disease progression/resolution by comparison on subsequent visits.

Animate foreign bodies in ear are seen mainly in the form of insects, most commonly cockroaches, beetles, flies and occasionally arachnids like ticks and spiders.^{6,7} These should be first killed using one of the several recommended agents (like ethanol) before attempting removal.^{7,8} Extraction is done using different instruments either under direct vision or ear microscopy.⁹ Presence of centipede inside ear canal is an uncommon occurrence and to author's knowledge, only one published case report exists.¹⁰ Present case report elucidates the utility of VO in successful removal of a centipede together with large amount of impacted cerumen which had served a protective role.

CONCLUSION

Video otoscopy has good utility in diagnosing patients presenting with ear related complaints and in removal of aural foreign bodies.

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