

Case report:

Removal of Aural Tick in a General Practitioner Setting During COVID-19 Lockdown

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Abstract

Foreign body in the ear including beads and seeds is not uncommon in children. Tick also has been a common aural foreign body especially in tropical climate countries. Although in older cooperative children it can be attempted in the clinic setting, most of paediatric aural foreign bodies require general anaesthesia. In addition, a general practitioner setting may impose additional limitations. The available instruments and experience maybe be different from a tertiary referral centre. We report a case of a 3-year-old child with left ear pain for 4 days associated with loud crying when the pinna was touched. It has been worsening until the cry became continuous. The mother was quite hesitated to bring the child to hospital because of the lockdown situation. She sought nearby general practitioner where the engorged tick was removed without any complication in that clinic alone.

Keywords: Foreign body; ear tick; general practitioner; clinic

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INTRODUCTION

Foreign body in the ears are not uncommon encounters in tertiary centres with otolaryngology setting. Depending on the types of foreign body, its removal often needs special instruments and often requiring sedation or general anaesthesia, especially if it involves relatively younger-aged children. This is important to avoid injury to the ear canal and tympanic membrane. Half of the aural foreign body cases (59.8%) occur in children of less than 10 years old¹. Tick infestation into the ear drum is uncommon, and removal in a 3-year-old child is a near impossible at general practitioner (GP) setting.

CASE REPORT

A 3-year-old girl was noted by mother for being easily irritable for 4 days, especially whenever the right ear was touched. The child appeared uncomfortable with excessive crying. The mother also noticed that child was less attentive to surroundings. The mother decided to bring the child to a GP since the problem

occurred during lockdown period and travel to distant tertiary hospital was quite troublesome.

Upon arrival at the clinic, the patient appeared restless. Her vital signs were stable. No fever and ear discharge seen. On otoscopy examination, there was a greyish swelling in the right ear canal. It was identified as an engorged tick, located in the outer-third of the ear canal (Figure 1).

The child was calmed down. We asked the father to hold her head still in order to minimize movement and trauma. By using the crocodile forceps with suction (Figure 2), the tick was successfully removed. The procedure took half an hour to get the huge living tick removed. Based on our observation, the tick has been resting in the ear probably within 2 or 3 days. There were blackish faecal materials inside the ear canal. We prescribed syrup paracetamol and syrup cloxacillin to cover for infection. We advised to bring the child immediately if there is any sign of infection such as ear discharge, fever or and pain.

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Figure 1: Tick in the external ear canal



Figure 2: Removal of tick by using the crocodile forceps with suction Figure 1A

The child was successfully treated with the prescribed antibiotic ear drops after the extraction of the tick. No signs of local or systemic disease were observed in the patient during follow-up.

DISCUSSION

Tick is a type of ectoparasite, and it is from Ixodidae hard tick and Argasidae (soft tick)². Most of the patients contracting aural ticks are majority working in the farm. Tick infestations occur in all sites of

the human body especially skin, scalp and others. Infestation of tick in the ear canal is common in rural areas and it has been reported before³. Ticks may mimic mass within the ear canal when they grow bigger after sucking blood.

The ear canal is a perfect place to slip inside. The warm, moist conditions and protected shelter of an ear canal would be just the best place to hide. Wax in the ear attracts the insects where they get stuck behind hairs into wax, or penetrate the skin or eardrum⁴. Sometimes, patient has no complaint upon tick infestation if it is painless. Children are more likely to present to hospital than adults with a foreign body in the ear or nose⁵.

There are a few different ways that the insects can get into the ear. It could enter ear canal during sleeping at night, or when the child is playing near the bushes. Localized otalgia can be the presenting complaint. Facial nerve paralysis can be due to toxin released. Itching and tinnitus in the ear is associated with patients who had coexistent otomycosis developed over swollen vegetable or hygroscopic foreign bodies⁶. Some of the ticks may be still alive at presentation, usually is more painful compared to the dead ticks. In few reported cases, the person may not notice the insects entering their ear initially and later had the symptoms⁷. The most common symptoms of insect in the ear are pain and discomfort. It also may bite or sting while it remains trapped in the ear depending on the type of the insect.

Clearly, do not insert anything inside the ear such as probing object or a cotton swab in order to remove it from the ear because sticking something into the ear can push it further inside, which can lead to long lasting damage for examples, bleeding, bruising as well as ruptured the eardrum. In most of the cases, this foreign body in the ear will not cause any significant problems, but it can occasionally lead to complications. Regardless of the dangers, that foreign body has to be removed as soon as possible. Oral and topical analgesics are sometimes required in some cases to reduce the pain before referral to the tertiary center.

Ticks are blood-sucking arthropods and it is associated with many diseases worldwide and under public health concern⁸. Malaysia climate is considered as a suitable environment for tick. They are a type of parasite which lives by sucking the blood. Ear canal is an ideal area for breeding of a tick. Ear canal is a humid area and tick can easily enter the ear canal and stay within the confined areas for a long period of time.

Removing tick is a very important procedure to prevent further complication. There are many complications can happen when tick attach in the ear. It includes ear canal abrasion, laceration, bleeding, otitis externa, acute otitis media, rupture the ear drum and later can also infect the inner ear and extending to the brain⁹.

It must be removed immediately and carefully from the affected area. Several research or study or case reports/series in human and animal showed the risk of in 1 days or 24 hours of tick infestation and is especially high after 48 hours¹⁰. The careful, mechanical extraction of ticks using blunt, curved,

medium point forceps is recommended as safe and effective¹¹.

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Authors's contribution:

Data gathering and idea owner of this study: ZZ, AAH

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References:

1. Yaroko AA, Irfan M. An annual audit of the ear foreign bodies in Hospital Universiti Sains Malaysia. *Malaysian Family Physician* 2012;7(1):2-5, DOI: 10.9734/JAMMR/2017/34840.
2. Al-juboori AN. Aural foreign bodies: descriptive study of 224 patients in Al-Fallujah General Hospital, Iraq. *International Journal of Otolaryngology*. 2013; 2013, DOI: 10.1155/2013/401289.
3. Marchette NJ. Rickettsioses (tick typhus, Q-fever, urban typhus) in Malaya. *Journal of Medical Entomology*. 1966;2(4):339-71, DOI: 10.1093/jmedent/2.4.339.
4. Kasle D, Waldman E. Tick Attached to the Tympanic Membrane. *New England Journal of Medicine*. 2019;380(18):1761, DOI: 10.1056/NEJMicm1812049.
5. Morris S, Osborne MS, McDermott AL. Will children ever learn? Removal of nasal and aural foreign bodies: a study of hospital episode statistics. *The Annals of The Royal College of Surgeons of England*. 2018;100(8):632-4, DOI: 10.1308/rcsann.2018.0115.
6. Moorthy PN, Srivalli M, Rau GV, Prasanth C. Study on clinical presentation of ear and nose foreign bodies. *Indian Journal of Otolaryngology and Head & Neck Surgery*. 2012;64(1):31-5, DOI: 10.1007/s12070-011-0149-2
7. Craig SS, Cheek JA, Seith RW, West A. Removal of ENT foreign bodies in children. *Emergency medicine Australasia: EMA*. 2015; 27(2):145-7, DOI: 10.1111/1742-6723.12387.
8. Magnarelli LA. Global importance of ticks and associated infectious disease agents. *Clinical Microbiology Newsletter*. 2009;31(5):33-7, DOI: 10.1016/j.clinmicnews.2009.02.001.
9. Nadchatram M. The beneficial rain forest ecosystem with environmental effects on zoonoses involving ticks and mites (Acari), a Malaysian perspective and review. *Tropical Biomedicine*. 2008;25(2):1-92, DOI: org/10.13918/j.issn.2095-8137.2015.2.88.
10. Gökdoğan O, Çakabay T, Baran H, Karabulut B, Tademir C, Vatansever Z. Otoacariasis: demographic and clinical outcomes of patients with ticks in the ear canal. *Brazilian Journal of Otorhinolaryngology*. 2016; 82(4):416-421, DOI:org/10.1016/j.bjorl.2015.07.018.
11. Parola P, Raoult D. Ticks and tickborne bacterial diseases in humans: an emerging infectious threat. *Clinical Infectious Diseases*. 2001; 32 (6):897-928, DOI: 10.1086/319347.