

Swimmer's Ear: A Case Report and Literature Review

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Abstract

Introduction: Otitis externa (OE) Circumscrite is an inflammation accompanied by furuncle growth in the outer ear with or without infection. Circumscrite OE events are identified with swimmers or other names Swimmer's Ear, because their ears are moist. Circumscrite OE cases can be distinguished based on the duration of action, namely acute or chronic.

Case Reports: A 21-year-old male patient came with complaints of pain in the ear, previously the patient also felt a feeling of fullness in the ear. Previously the patient had a history of swimming and cleaning the ears afterwards. Another complaint is decreased hearing and yellow discharge from the left ear.

Conclusion: Otitis externa (OE) Circumscrite or Swimmer's Ear is an inflammation of the ear caused by bacteria, fungi or their groups that grow in moist places. To make a diagnosis through anamnesis, local status examination and support. OE management can be done with pharmacology and Spooling measures to clean the ear.

Keyword: Ear pain, Hearing Loss, Ear Inflammation, Otitis External

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Introduction

Otitis externa (OE) or commonly called swimmer's ear is an inflammation that can cause infection or not that occurs in the external ear canal, such as the pinna or tragus. It is caused by bacterial, fungal, and viral infections. Otitis external itself can be classified as acute cases where the incidence is less than 6 weeks or chronic cases where more than 3 months. [1]

There is no specific gender which predominates in this case and otitis externa can occur in any age group, but rarely occurs at the age of less than 2 years[2][3]. Peak age 7-14 years. About 10% of people will develop otitis externa during their lifetime, and most cases (95%) are acute. Most cases occur during summer and in tropical climates; it may be related to humidity increase.[10]

Case Report

The patient, a 21-year-old student, came to Soegiri Hospital Lamongan with complaints of pain in his left ear for one day. Pain is felt in the left ear when scratching the ear with a finger because it feels itchy, pain is also felt behind the ear. In addition, the patient felt full ear two days ago. Previously, the patient underwent a swimming test during the TNI entry test, after which the patient cleaned his ear, and the patient felt that there was cotton left in it. The patient also said that there was a decrease in hearing and had a yellow ear discharge that smelled when cleaning it. Physical examination within normal limits. Examination of the local status of the patient's left ear found discharge, hyperemia, and furuncle. The patient's tympanic membrane cannot be evaluated. The patient was given initial treatment, namely washing the ears using PZ 25cc after which he was prescribed cefadroxil 500mg 2x1 as an antibiotic, anti-inflammatory diclofenac sodium 25mg 1x1 and an anti-pain otopain ear drop 3 ddgtt1 left ear.



Figure 1. Left ear of a patient with circumscribed otitis externa

Discussion

Otitis external (OE) is an inflammation that can affect approximately 10% of the population. The inflammation can occur with or without infection, besides that OE can also occur acutely or chronically. Otitis externa may be associated with the occurrence of eczema in the ear canal, besides that the incidence of OE is closely related to swimmers, hence it is called

Swimmer's Ear. Other risk factors for OE are in a humid environment, in people with narrow ear canals, with hearing aids or after exposure to mechanical trauma.[5]

Circumscribed otitis externa (furuncles = boils) is an inflammation of the outer third of the ear canal containing skin adnexa, such as hair follicles, sebaceous glands, and cerumen glands, so that in that place infection can occur in the pilosebaceous, thus forming a furuncle.

The etiology of OE is environmental changes, especially the combination of increased temperature and humidity, causing germs and fungi to easily grow³. The pathophysiology of OE is also explained by environmental changes, especially the combination of increased temperature and humidity causing germs and fungi to easily grow. Second, there is a minor trauma, often due to swimming or excessive cleaning of the ear canal. The latter can also be in the presence of cerumen, resulting in an acidic membrane containing lysozyme that protects the ear canal. Cerumen is hydrophobic, preventing water from penetrating the skin. Cerumen has a pH level of 6.9 which can inhibit microbial growth. Lack of cerumen is a predisposing factor for infection.[1][11]

Other predisposing factors that can cause otitis externa irritation, changes in the pH of the canal skin which are usually acidic to alkaline, environmental changes, especially a combination of increased temperature and humidity, a minor trauma often due to threads or excessive ear cleaning and patients with immunocompromised status (diabetes), lymphoma, patients with transplantation, AIDS, post chemotherapy and radiotherapy.[2][13]

As previously stated, Otitis Externa is divided into two phases, namely the acute phase which lasts for approximately 6 weeks, with symptoms of heat in the ear and pain radiating to the jaw, then discharge from the ear can be from serous to purulent. The ear canal is inflamed and swollen, there is decreased hearing due to conductive deafness arising from a collection of wax and otorrhea. There is also enlarged lymph nodes in severe cases and soft tissue cellulitis. For the chronic phase or those that have occurred for approximately 3 months with symptoms of irritation and a strong urge to scrape the ear, for the fluid has decreased and dried to form a crust, finally the skin becomes hypertrophied so that it becomes chronic stenotic otitis externa, but this is very rare. Happen.[3]

To establish the diagnosis of otitis externa, it is necessary to take a history, check the local status of the ear canal, and can be added with supporting examinations. In the anamnesis the patient complained of otalgia (pain in the ear), the pain was characterized by stiffness in the soft tissues of the mandibular ramus and mastoid. Both the presence of swelling and decreased hearing, the last is otorrhea or ear fullness, but this is rare. On examination of local status, inspection found red ear canal, edema. Pain is also found when the tragus is pressed. The presence of inflammation, hyperemia and edema when looking at the external ear 6. In

supporting examinations, a bacterial culture can be performed to identify pathogenic microorganisms, KOH examination can also be performed to confirm the diagnosis of otomycosis.[4]

Otitis media patients are given treatment according to the existing conditions when they have become abscesses, sterile aspirated to remove the pus. Locally given antibiotics in the form of ointments, such as polymyxin B or bacitracin, or antiseptics (2-5% acetic acid in alcohol). If a thick furuncle is found, an incision is made, then a drain is placed to drain the pus. Give ear tampons using 10% ichthammol glycerin to reduce pain. Usually there is no need to give antibiotics systemically, only symptomatic drugs such as analgesics and sedatives.[3][11]

Otitis externa needs to be distinguished from other diagnoses. If the patient comes with ear pain or discharge from the ear if it occurs in children with otitis media with ear drainage from a ruptured tympanic membrane. In addition, there are differential diagnoses of OE such as contact dermatitis of the ear canal, psoriasis, furunculosis, Herpes zoster optics (Ramsey Hunt syndrome), Temporomandibular joint syndrome (TMJ), Ear canal carcinoma.[8]

The incidence of otitis externa 25% can interfere with daily activities, and some will develop into chronic otitis externa, and can cause canal stenosis. Ear and hearing loss. The most common complications are malignant otitis externa and periauricular cellulitis. In addition, it can also be myringitis, perichondritis, facial cellulitis. In severe infections it can cause osteomyelitis of the temporal bone and cranial nerve palsies. The most involved cranial nerve is the facial nerve. Other complications associated with malignant otitis externa include meningitis, Dural sinus thrombosis, and cranial abscess.[12]

Symptoms will persist for 6 days after administration of antibiotic drops or steroids⁷. In many cases of acute OE will resolve spontaneously, but it can recur, the risk of recurrence is not known. There is potential for hearing loss and canal stenosis from chronic inflammation, which can occur with a single episode of acute OE.[5]

Conclusion

Circumscribe otitis externa is an inflammation with or without infection that can occur in a short time of less than 6 weeks (acute) or more than 3 months (chronic). This is characterized by the condition of the patient's ear that is often moist or patients who like to swim, so it is called Swimmer's Ear. To make a diagnosis in patients with circumscribe OE, an anamnesis can be performed to find complaints of pain, ear fullness and decreased hearing, secondly through localized status and the last is a bacterial culture supporting examination to determine the causative bacteria. Circumscribe OE treatment can be done with ligase after which pharmacological therapy is given to reduce symptoms and inflammation in the ear.

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