

Bilateral chronic active Otitis media associated with tonsillitis, and allergic rhino-conjunctivitis in a 26-month-old boy: A case report

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Abstract

Introduction: Chronic Otitis media is a permanent abnormality on the tympanic membrane following a long-standing middle ear infection emanating from a previous acute infection. Patients usually present with persistent drainage from the middle ear. It may be accompanied by complications such as septicemia, meningitis, brain abscess, facial paralysis, and deafness in children. Associated rhino-conjunctivitis is not common but this case presented with clinical features of chronic active otitis media, tonsillitis, and allergic rhino-conjunctivitis.

Case presentation: A 26-month-old boy presented in the clinic with recurrent bilateral ear discharge of sixteen months durations. Symptoms began sixteen months before presentation with left ear discharge and later followed by right ear discharge. There was associated recurrent nasal discharge, mouth breathing, nasal itching and occasional snoring. There was itching, watering, and redness of both eyes, occasional lower lid swelling, and cough. Examination showed a young boy with copious mucopurulent discharge from the right auditory canal. The right tympanic membrane could not be visualised due to the discharge. The left auditory canal was clear, the tympanic membrane was dull and there was a central perforation. There were hyperaemic tonsils bilaterally in the oral cavity and discrete submandibular lymph nodes. The eyelids were oedematous bilaterally, and the conjunctivae of both eyes were red. He was managed for bilateral chronic active otitis media, tonsillitis, and allergic rhino-conjunctivitis. He was stable before discharge and followed up on an outpatient basis.

Conclusion: This is a case of a twenty-six-month-old boy treated for bilateral chronic active otitis media, associated with tonsillitis and allergic rhino-conjunctivitis. It is not common for patients to present with this kind of multiple morbidities. Patients with this kind of presentation need to be properly managed to avoid complications associated with these diseases.

Keywords: Otitis media; Rhino-conjunctivitis; Case Report.

Abbreviations: Not applicable.

Introduction

Otitis media is the inflammation of the middle ear, and it is synonymous with infections of the middle ear. However, it could also result from allergies and anatomical defects. Chronic Otitis media is a permanent anomaly on the tympanic membrane following an established middle ear infection originating from a previous acute Otitis media. The chronic discharging ear is one with a punctured tympanic membrane and persistent drainage from the middle ear [1, 2]. It may often be

accompanied by complications such as septicemia, meningitis, brain abscess, and facial paralysis, and it is believed to be responsible for more than two-thirds of deafness in children [3]. Although allergic rhino-conjunctivitis (inflammation of the nostrils and the eyes) is not common it can occur as experienced in the case of the patient being presented.

Case presentation

A twenty-six-month-old boy presented in the clinic with recurrent bilateral ear discharge of sixteen months durations. Symptoms began sixteen months before presentation with

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left ear discharge and a few weeks later, the right ear began to discharge. The discharge from the left ear was copious, foul-smelling, and yellowish. There was a preceding fever, diarrhoea, and vomiting five days before the onset of ear discharge. There was no evidence of hearing loss. The mother claimed that the child responded to calls and instructions appropriately. There was recurrent nasal discharge, mouth-breathing, nasal itching, and occasional snoring. There was itching, watering, and redness of both eyes, occasional lower lid swelling, and cough. He was treated at a Teaching Hospital in Nigeria with daily aural toileting, and dressing and has had various antibiotics, the names of which were unknown. The patient had repair of Tetralogy of Fallot (the ears were not discharging at the time of operation.) in India four months before presentation. No history of sickle cell disease in the family. The mother started ante-natal care at a gestational age of four months. She was treated for malaria with Artemisin/lumefantrine four tablets twice daily for three days at the gestational age of four and eight months respectively.

Examination showed a young boy, who was not pale, afebrile, and afebrile. There was copious mucopurulent discharge in the right auditory canal. The right tympanic membrane could not be visualized due to the discharge. The left auditory canal was clear, the tympanic membrane was dull and there was a central perforation. He obeyed instructions at normal speech tone and intensity. There were slightly hypoplastic ala nasi bilaterally. The nostrils were patent. The turbinates were not engorged. There were hyperaemic tonsils bilaterally in the oral cavity and discrete submandibular lymph nodes bilaterally. The eyelids were oedematous bilaterally and the conjunctivae of both eyes were red. A provisional diagnosis of bilateral chronic active (suppurative) Otitis media, associated with Tonsillitis, Allergic Rhinitis, and allergic Conjunctivitis was made.

The diagnosis was explained to the mother and that possible complications include hearing loss, cholesteatoma or granulation tissue formation, facial paralysis, speech problems, educational problems, attention problems, valvular heart disease, impaired vision and problems with social adaptation. The boy would have to be properly treated to avoid these problems in the future. Ear swabs for microscopy, culture and sensitivity, full blood count, and x-ray of the post-nasal space were requested. Then, the patient was commenced on aural toileting twice daily, daily dressing of the right ear with Otomed (polymyxin B, neomycin/hydrocortisone) ear drops for 10 days, Actifed (triprolidine/pseudoephedrine) syrup 2.5mls twice daily for three days, amoxicillin/clavulanic acid 228mg twice daily and ascorbic acid 100mg daily for 7 days. When seen in the clinic two weeks later, ear discharge had ceased. Full blood count was normal. Ear swab for microscopy culture and sensitivity revealed *Pseudomonas aeruginosa* sensitive to amikacin. X-ray of the post-nasal space was essentially normal. He was to continue Otomed ear drops, ascorbic acid 100mg daily, triprolidine/pseudoephedrine syrup 2.5mls twice daily for 10 days. He was seen in the clinic 11 weeks later and the ear discharge had resolved. His mother complained that he had a cough, itching of the nostrils and watery rhinorrhoea.

No nasal blockage and no difficulty in breathing. The right tympanic membrane was dull and intact. The turbinates were not engorged. An assessment of bilateral chronic active Otitis media, tonsillitis (resolving), allergic Rhinitis and allergic conjunctivitis (resolved) was made. The patient was placed on Otrivin (xylomethazoline) nasal drops 0.05% thrice daily, Actifed syrup 2.5mls twice daily and ascorbic acid syrup 100mg daily for seven days. He was to be followed up on an outpatient basis.

Discussion

The 26-month-old boy presented with bilateral ear discharge with a perforation in the left ear and purulent discharge in the right auditory canal. The major predisposing factors to chronic Otitis media are genetic factors and depressed immunity which may lead to susceptibility to recurrent infections and persistently discharging ear [1]. Chronic suppurative Otitis media was found to be associated with diabetes mellitus and Human immunodeficiency virus infection although this patient did not have any of these. Various aetiological agents have been reported in chronic suppurative Otitis media with *Pseudomonas aeruginosa* being the commonest in most centres [3,4] and it was the cause in the case of this patient. Most tympanic membrane perforations resulted from infection and are preventable via appropriate health education, and they appear during the wet humid seasons of the year which is important for medical practitioners to know. Central perforation was reported as being the commonest form of presentation according to Abraham et al in a study conducted in Tanzania [5]. Chronic suppurative otitis media is generally associated with some degree of hearing loss, which is often the patients' chief complaint. This hearing loss is usually conductive, resulting from tympanic membrane rupture and changes in the ossicular chain due to fixation or erosion caused by the chronic inflammatory process [6]. However, the patient being presented did not have features of hearing loss. The current treatment involves administering a combination of antibiotic and anti-inflammatory ear drops such as Ciprodex (ciprofloxacin 0.3%/dexamethasone 0.1% [7]). Otomed that was given to this patient had this combination of drugs. Although most patients experienced a relief of symptoms, a fraction of patients remained refractory to treatment. This patient responded well to medical treatment as revealed in this account. Successful topical therapy consists of three important components: selection of an appropriate antibiotic drops, regular aggressive aural toilet, and control of granulation tissue [8]. The treatment given in this case had this combination. The anti-inflammatory effect of steroids is an important advantage when significant amounts of granulation tissue are present. The steroid-containing drops like Otomed that was used in this case should be considered in chronic suppurative Otitis media with granulation tissue. Aural toileting should be performed two to three times per day just before the administration of topical antimicrobial agents. Topical steroids like Otomed are used to reduce granuloma formation and it is conventional to use combined antibiotic and steroid preparations. Treatment should be continued for three to four weeks after the end of otorrhoea. Oral anti-histamines are a

good choice when allergy involves the nose, pharynx, and the eyes simultaneously [9]. Oral Triprolidine used in this case is an anti-histamine and it worked for the patient. The usage of clindamycin or amoxicillin-clavulanic acid, can be effective in the treatment of aerobic and anaerobic β lactamase producing bacteria, as well as Group A β -hemolytic streptococci infections [10]. It is very important to take throat swab for microscopy, culture and sensitivity before administering antibiotics in the treatment of acute tonsillitis [11,12].

Conclusion

This is a case of a twenty-six-month-old boy who presented with recurrent bilateral ear discharge of 16 months duration. There were associated cough, itching of the nostrils and the eyes, and watery rhinorrhoea. He was treated for bilateral chronic active otitis media, tonsillitis, and allergic rhinoconjunctivitis. It is unusual for patients to present with multiple morbidities as in this case. She was still being managed on an outpatient basis. Patients need to be properly managed to avoid complications associated with these conditions.

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