CASE REPORTS

Turicella Otitidis as an Unusual Agent Causing a Posterior Auricular Abscess

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Received 12 October 2000/Returned for modification 5 December 2000/Accepted 26 January 2001

A posterior auricular abscess in a 3-year-old girl was confirmed to have been caused by an unusual organism, Turicella otitidis.

CASE REPORT

We describe a case of a 3-year-old girl who presented to the emergency room with a 4-day history of pain and swelling behind her right ear. She had previously been monitored by an ear, nose, and throat specialist for four episodes of acute otitis media beginning at the age of 1 year. She had recently been monitored as well for excessive sebum in both ears. The presenting complaint was first noticed by the child’s mother when an area of swelling, approximately the size of a pea, that was tender to touch and erythematous appeared behind the right ear. The child had been taken to a walk-in clinic 3 days prior to presentation and had started taking oral amoxicillin. Despite the antibiotics, the area of swelling increased in size over the following days. There was no reported fever, no discharge, and no history of trauma. The child looked well when seen in the emergency room and was afebrile. Physical examination revealed a firm, tender, erythematous immobile mass that was 1.5 cm in diameter and a few small cervical lymph nodes. The right tympanic membrane was normal. Initial laboratory investigations were unremarkable. The child was admitted to the medical ward and started on intravenous cefuroxime for a presumed diagnosis of cellulitis and possibly mastoiditis.

During the hospital course, the mass became mobile and fluctuant. The child developed a fever of up to 40°C on the second day of hospitalization. Plain X-ray was not suggestive of fluctuant. The child developed a fever of up to 40°C on the second day of hospitalization. Plain X-ray was not suggestive of otitis media beginning at the age of 1 year. She had recently been monitored as well for excessive sebum in both ears. The presenting complaint was first noticed by the child’s mother when an area of swelling, approximately the size of a pea, that was tender to touch and erythematous appeared behind the right ear. The child had been taken to a walk-in clinic 3 days prior to presentation and had started taking oral amoxicillin. Despite the antibiotics, the area of swelling increased in size over the following days. There was no reported fever, no discharge, and no history of trauma. The child looked well when seen in the emergency room and was afebrile. Physical examination revealed a firm, tender, erythematous immobile mass that was 1.5 cm in diameter and a few small cervical lymph nodes. The right tympanic membrane was normal. Initial laboratory investigations were unremarkable. The child was admitted to the medical ward and started on intravenous cefuroxime for a presumed diagnosis of cellulitis and possibly mastoiditis.

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A posterior auricular abscess in a 3-year-old girl was confirmed to have been caused by an unusual organism, Turicella otitidis.

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seen, suggesting the possibility of an epidermoid or dermoid cyst.

The microbiology of otitis media has been extensively investigated by means of middle ear effusion cultures obtained by needle aspiration. Results have consistently revealed the major pathogens to be *Streptococcus pneumoniae* and *Haemophilus influenzae* in all age groups (1). More recently, nonfermenting coryneform bacteria have been isolated from a number of patients with ear infections. Funke et al. isolated eight samples of nonfermenting coryneform bacteria identified as *Corynebacterium afermentans* by biochemical characteristics (3). However, the isolates lacked mycolic acid and thus were not classified in the genus *Corynebacterium*. In 1994, Funke et al. clearly delineated *C. afermentans* and the ANF-1-like (absolute nonfermenter-1; Centers for Disease Control and Prevention classification) coryneform bacteria by using 16S rRNA sequencing and proposed a new genus, *Turicella*, containing one species, *T. otitidis* (5). Subsequent phylogenetic and phenotypic analyses have revealed the presence of a third species in the coryneform group of ANF-1-like bacteria, *Corynebacterium auris* (4). The most recent case report identified *T. otitidis* in a patient with otorrhea associated with maxillolabiopalatine cleft surgery (6). These early reports suggest an important role for the ANF-1-like coryneform bacteria in the pathogenesis of middle ear infections.

Previously reported nonfermenting coryneform bacteria isolated from ear fluids were often polymicrobial in etiology, raising doubts about their pathogenicity (3). In our case, isolation of *T. otitidis* in pure culture with a positive Gram stain in the clear setting of infection supports a pathogenic role for this organism. The fact that the organism was isolated only on subculture despite being seen on the original Gram stain can be explained by the antecedent course of antibiotics with which the child was treated, thus rendering the abscess partially sterile.

We thank the Laboratoire de santé publique du Québec, the Department of Microbiology, Montreal Children’s Hospital, and Jacqui Brinkman, McGill University Health Centre, for their laboratory support.

**REFERENCES**