Clinical Cases in Dermatology
Series Editor: Robert A. Norman

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Clinical Cases in Early-Years Pediatric Dermatology

Springer

Chapter 4
A Four- Year- Old Girl with Otalgia

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A four-year-old caucasian girl complained of ear fullness, mild otalgia and poor otorrhea. The symptoms began in September and the girl came to ENT observation two months later.

At symptoms onset, the patient was seen by a pediatrician who prescribed oral antibiotic and cortisone therapy. After about two weeks the symptoms showed up again and therefore the same pediatrician prescribed intramuscular antibiotic and oral cortisone. Despite this the therapy was not effective and for this reason the mother took her daughter to the otolaryngologist.

The video-otoscopy showed the skin of the external auditory canal and the outer face of the left tympanic membrane hyperemic and covered with a whitish "patchy" cloth (Fig. 4.1). The tympanometry was normal for both ears. The latter therefore excluded middle ear involvement (effusive otitis media, acute otitis media).

The clinical history documented that the symptoms began in September after a few days returning from a beach holiday.

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F. Arcangeli, T. M. Lotti (eds.), *Clinical Cases in Early-Years Pediatric Dermatology*, Clinical Cases in Dermatology,
https://doi.org/10.1007/978-3-030-89089-6_4

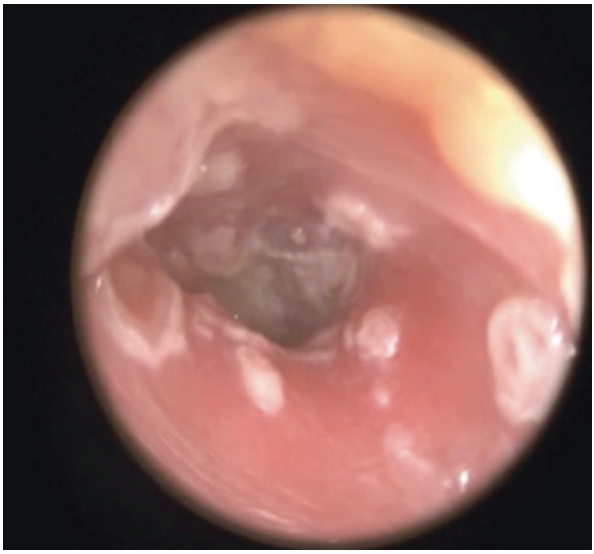


Fig. 4.1 Oto-endoscopic aspect of the left ear

Based on the clinical history and photograph, which is your diagnosis?

1. Acute bacterial external otitis
2. Otomycosis
3. Acute otitis media

Diagnosis

Otomycosis.

Discussion

The clinical history and the failure to respond to antibiotics and steroids therapy suggested the non-bacterial genesis of the disease. The normal tympanometry of both ears excluded a middle ear involvement.

The skin of the external auditory canal and the outer face of the left tympanic membrane appeared hyperemic and covered with a whitish "patchy" cloth. This is a typical feature of otomycosis.

Otomycosis is a fungal infection of the external ear canal. It has been estimated that otitis externa make up 5 to 20% of ear-related visits to ENTs. Most of these infections are caused by bacteria but 9 to 25% are caused by fungi (otomycosis)

[1–3]. The otomycosis involves the external ear canal squamous epithelium and is characterized by pruritus, occasional otalgia and sometimes hypoacusia [3, 4]. Predisposing factors are considered: a failure in the ear's defense mechanisms (changes in the coating epithelium, changes in pH, quantitative and qualitative changes in ear wax), bacterial infections, hearing prosthesis, self-inflicted trauma (use of q-tips to clean the ear), swimming, broad spectrum antibiotic agents, steroids and cytostatic medications, neoplasia and immune disorders. All of these can cause an highest susceptibility to the fungal infections [4, 5].

In pediatric age, a relevant aspect of antifungal therapy is the handling and safety of the chosen drug. Our patient was treated with Ozoile (Stable Ozonides with Vitamin E acetate) which acts as a biological inducer and regulates the main metabolic pathways. Ozoile also stimulates the endogenous defense system and through the regulation of gene transcription promotes tissue regeneration and damage-injury repair.

It has a broad-spectrum microbicide activity due to its high affinity for the lipoprotein components of the bacterial and fungal wall and for the oxidizing action (Table 4.1).

After three weeks of therapy, complete clinical recovery was achieved without any complications (Fig. 4.2).

Table 4.1 The broad-spectrum activity of Ozoile

Time (h)	4	12	24	48
Sample	OZOILE	OZOILE	OZOILE	OZOILE
E. coil	99,40	99,99	98,20	98,20
P. aeruginosa	99,99	99,99	98,99	98,99
S. aureus	99,07	99,99	99,70	99,70
C. abicans	99,99	99,99	99,99	99,99
C. glabrata	99,99	99,99	99,99	99,99
A. niger	–	–	–	–
G. vaginalis	87,50	99,99	99,99	99,99
P. mirabilis	96,47	99,99	99,99	99,99
P. acnes	99,99	99,99	99,99	99,99
E. faecalis	82,77	99,99	99,99	99,99
S. epidermidis	99,99	99,99	99,99	99,99
T. mentacrophytes	99,99	99,99	99,99	99,99
S. agalactiae	48,75	99,99	99,99	99,99
E. cloacae	68,60	99,99	99,99	99,99
B. cepacia	90,00	99,99	99,99	99,99
k. oxytoca	99,99	99,99	99,99	99,99
A. baumannii	99,99	99,99	99,99	99,99
C. pseudodiphterticum	99,99	99,99	99,99	99,99



Fig. 4.2 Complete clinical recovery after three weeks of Ozoile therapy

Key Points

- Otomycosis is an infection that involves the external ear canal epithelium, characterized by itching and occasionally otalgia
- Otomycosis is more frequent in the hot or humid seasons and climates
- A careful consideration of the clinical history, the video-otoscopy and a normal tympanometry are useful for the diagnosis
- The topical therapy is gold standard and Ozoile is a safe and effective treatment

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