

Inflammation of the outer ear

Outer ear inflammation includes skin inflammation and cartilage inflammation.

Inflammation of the skin, external auditory canal and auricles

- It does not differ from other skin inflammations, it just has worse accessibility.
- A decrease in free fatty acids in sebum contributes to inflammation development → skin alkalosis → reduces lysozyme production.

Otitis externa circumscripta - Furunculus meati acustici externi

Etiology

Staphylococcus aureus:

- most often bacteria is mechanically clogged to the hair follicle or gland,
- more common in workers in humid, dusty places, and diabetic patients,
- rarely affects children.

Clinical picture

- It develops rapidly, limited, creating a necrotic pin that matures and usually evacuates on the 3rd day,
- severe pain, worsening while lying down, with pressure, and pulling on the auricle,
- hearing loss only after closing the ear canal,
- may start to spread – collateral swelling, phlegmon, swollen nodules, fever.

Diagnostics

- From the anamnesis and clinical symptoms, hearing recanalizes during recanalization.

Dif. dg.

- **otitis media (it lacks palpable pain in the ear canal).**

Therapy

1. **Local**: brush with alcohol (analgesic, accelerates graft maturation), or *Ophthalm-Framykoin*®.
 2. **Total**: antistaphylococcal ATB.
- Relieve pain: elevated head position, analgetics.
 - We do not usually make an incision.



Otitis externa

Otitis externa diffusa

- Without borders, it affects the entire ear canal (sometimes the drum and so on). It can also accompany discharge in otitis media.

Causes

- They are various and usually combine, lead to a reduction in the function of the sebaceous glands, reduce the elasticity of the skin, create ragads, the pH of the skin becomes alkaline.
- Adverse environmental influences (dust, humidity, temperature).
- Direct physical or chemical irritation: water, soaps, and cosmetics macerate the skin.
- Metabolic disorders and allergies.
- According to the etiology, we distinguish between eczematous, bacterial, viral, and fungal diffuse external otitis.

Eczema meati acustici externi

- eczema, caused by allergens or chemicals,
- little irritation, unreasonably great response,
- recedes after the effect of the pollutant disappears, the course worsens with repetition,
- often secondary infections.
- **Acute eczema**: reddening of the skin, eruption of pimples, wetting, itching, burning, yellowing.
- **Chronic eczema**: dry – flaking, peeling skin, itching.

Therapy

- wetting: rinsing with boric acid water,
- dry: zinc pastes, tar powders, corticoid ointments.

Otitis externa bacterialis

Etiology

staphylococci, streptococci, pseudomonads, escherichia, proteus,

- most often occurs in the summer in connection with swimming.

Clinical picture

- usually takes place without febris,
- burning pain in the ear canal, reactions in the nodes,
- the ear canal gradually closes, hearing loss occurs,
- this also includes erysipelas,
- inflammation rarely penetrates to the cartilage or periosteum (perichondritis, otitis externa maligna – destruction of the surrounding temporal bone).

Therapy

- thorough treatment of rinsing, cleaning, acidification of the environment,
- boric acid powder, 1% vinegar, or topical ATB according to susceptibility to bacterial agents, possibly in combination with a topical corticosteroid, most often ciprofloxacin + fluochinolone (e.g. InfaIn duo). CAVE: due to ototoxicity, do not use ATB polymyxin B or aminoglycoside antibiotics in the ear, which are found in ATB drops intended for eye application.

Otitis externa maligna

It is an infection of the external auditory canal caused by gram-negative *Pseudomonas aeruginosa* in elderly and diabetic (90%) or otherwise immunosuppressed patients. Inflammation can spread to the mastoid process with mastoiditis and further intracranially. Complications include obstruction of the external auditory canal or damage to the cranial nerves (V–XII).

However, some sources define otitis externa maligna by spreading external *pseudomonas* otitis into the mastoid process. The mortality rate for such infections is then up to 20%.

Clinical manifestations

- severe pain in the area
- purulent discharge from the ear canal
- neurological symptoms in case of intracranial infection.

Otitis externa mycotica

Etiology

Aspergillus, Mucor, Penicillium,

- usually associated with high humidity – common in the mines and tropics.

Clinical picture

- cotton-like coatings, yellowish-white to green-black (according to mold),
- itching, hearing loss rarely, often bilaterally.

Therapy

- topically: lavages with boric acid, salicylicum, amphotericin, etc.

Otitis externa virosa

Otitis haemorrhagica bullosa

Etiology

influenza virus.

Clinical picture

- pale or blood – covered blisters in the bony part of the ear canal and on the eardrum,
- considerably painful.

Herpes zoster oticus

- In addition to blisters, there is also a picture of polyradiculoneuritis.
- The landscape of V3, VII and VIII is mainly affected unilaterally.

- Burning pain, fever, headache.
- Disability N. VII – **peripheral paralysis** – heals with large residues.
- Disability N. VIII – **perceptual hearing loss**, tinnitus, dizziness.

Inflammation of the external auditory canal and auricle cartilage

Perichondritis auriculae

- Deep, initially phlegmonous, later abscess inflammation.

Etiology

predominantly Pseudomonas or Staphylococcus.

Clinical picture

- mainly on the outer surface of the vault,
- severe pain, fever, and lymphadenopathy,
- abscesses form under the perichondrium, cartilage dies (avascular and septic necrosis),
- finally, deformities of the lobe form occur.

Myringitis (inflammation of the tympanic membrane)

Etiology

It is usually formed by the infection process in diffuse inflammation of the ear canal. The fine layer of the epidermis easily separates and the exposed fibrous layer granulates, especially in recurrent and prolonged inflammations

Clinical picture

- redness and swelling of the eardrum – the typical appearance is blurred,
- pretympenic retention of peeled skin detritus and pathological secretions,
- the drum is not arched,
- no more severe pain and fever,
- there may be a slight transmission hearing loss.

Links

Source

- BENEŠ, Jiří. *Studijní materiály* [online]. ©2007. [cit. 2009]. <http://jirben2.chytrak.cz/materialy/orl_jb.doc>.
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