Topic of lecture: Acute purulent inflammatory diseases of middle ear (otitis media purulenta acuta).
Definition

- Purulent otitis media – inflammatory infectious disease of middle ear cavities.
The typical features of it are:

- It happens often (more than 30% of all patients in ENT department);
- can result in the hearing loss;
- passes to chronic otitis;
- can lead to development of intracranial complications.
Etiology

- Viruses and bacteria cause acute purulent otitis media.
What are the most important ways of infection penetration into the middle ear?
An infection gets into the middle ear by next ways:

- From the cavity of nose through an auditory tube. Often it happens at acute rhinitis.
An infection gets into the middle ear by next ways:

- Through external auditory canal - when ear-drum is damaged. It is at the break of ear-drum as a result of trauma.
The next way
What is the ear trauma mechanism?
Ear – drum trauma
What help can be given to patients with trauma?

- At the fresh breaks of eardrum such help is given: under an operating microscope the edges of the torn eardrum are adjusted to each other. They accrete whereupon.
An infection gets into the middle ear by next ways:

- Penetration of infection through a blood is hematogenic way. This way is basic at the infectious diseases.
Necrotic otitis
Necrotic otitis. Necrosis of mastoid process
What patients have more predispositions to acute otitis?
The important role plays

- the state of nose, paranasal sinuses, nasopharynx;
- such diseases as chronic rhinitis, deviation of nasal septum, purulent sinusitis;
- patients with chronic diseases;
- babies
Clinics

- It has three stages:
  - 1) nonperforated;
  - 2) perforated;
  - 3) reparative.
1 stage

- Basic complaint of patient is pulsating, shooting, prickly pain in the ear.
- A general weakness appears.
- Body temperature increases to 38-39°C.
- The inflammatory changes in the blood test.
Acute purulent otitis media
Acute purulent otitis media
2 stage

- There is the perforation of ear-drum
- Purulent discharge appears from an ear.
- Pain calms down in the ear, the general condition gets better, the temperature of body falls.
- At otoscopy the pulsating reflex is observed – a pus comes through the perforation by drops synchronously with of a pulse.
Perforation of tympanic membrane
3 stages

- An inflammatory process calms down, purulent discharge is stopped.
- An eardrum gets an ordinary color.
- Hearing loss remains. Hearing is restored slowly.
Anatomical structure of baby’s ear
Acute otitis at children

- Begins suddenly, at night.
- Temperature of body is ever-higher – 39-40°C.
- A child becomes uneasy, twists by a head, seizing ill ear by hand.
- The general condition gets worse considerably.
- Babies can have vomit, gastroenteric disorders.
Diagnostics

- Otoscopy
- X-ray
- Audiometry
- Impedansmetry (in first stage)
- CT
An otoscopy

- at first hyperemia of ear-drum appears;
- it becomes thick
- when much pus accumulates in a tympanic cavity, an eardrum knobs outside.
Mastoid process x-ray by Schüller
Treatment

I. 1. Antibiotics
2. Nasal decongestants
3. Ear drops
4. Symptomatic therapy
5. Physiotherapy
6. Myringotomy or paracentesis
Paracentesis of tympanic membrane
incision (puncture) after paracentesis
Peripheral paresis of facial nerve
Thanks for your attention
Suitable factors for development of mastioditis:

- High virulence of infection.
- Decrease of body’s common resistance.
- Poor pus drainage.
- Non rational therapy.
Mastoiditis.
Swelling of upper posterior wall of external acoustic meatus
Stages of antromastoidotomy
Stages of antromastoidotomy
Stages of antromastoidotomy
Trepanation of mastoid process