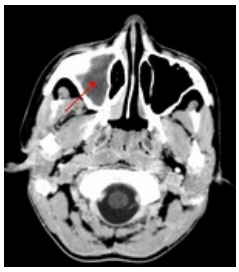
Sinusitis

Sinusitis is an inflammation of the paranasal sinuses. It often occurs as a complication of acute rhinitis, it can also follow inflammation of the dental bed. Acute inflammations are more often of viral origin, a bacterial superinfection can set in. It is most often an inflammation of the ethmoid cavity and the jaw cavity. Not infrequently, there is inflammation in multiple sinuses (pansinusitis). [1]


CT: Maxillary sinusitis

Chronic sinusitis affects patients with deviated nasal septum, after trauma, but also with cystic fibrosis. It is more common in immunosuppressed patients and is mostly of bacterial origin. [2] A complication of chronic sinusitis is the formation of "polyps". About 5% of the population suffers from the disease.[1]

Development of accessory nasal cavities

Secondary nasal cavities are established already in the fetal period. In the newborn, the ethmoid sinuses are present and the maxillary sinuses are established. The growth of the maxillary sinuses depends on the development of the dentition. The frontal bone pneumatizes from 4 years of age and the sphenoid from 5 years of age. The development of VDN is completed only in adulthood.

- sinus ethmoidales: well developed after birth, grow rapidly during the 1st-4th year, X-ray (X-ray) detection in year 1, fully developed after year 12;
- sinus maxillares: X-ray detection at 5 months, biphasic growth, fully developed at 22-24 years;
- sinus sphenoidales: development after 5 years, completely formed between 12-15 a year;
- sinus frontales: development after 4 years, complete after 15 years.[3]

Pathophysiology

- failure of normal mucus transport;
- reduced ventilation of the cavity – mucosal edema (viral or bacterial infection, hyperreactivity of the nasal mucosa, allergies) or anatomical abnormalities;
- stagnation of secretions, encasement of the movement of the cilia of the mucous membrane,
- drop in pH and decrease in oxygenation within the cavity.[4]

Etiology

- acute bacterial sinusitis most often follows a previous viral infection of the respiratory tract;
- the most common pathogens in children: *Streptococcus pneumoniae, Haemophilus influenzae*, further *Moraxella catarrhalis*;
- up to 13% have sinusitis of odontogenic origin.[4]
- local causes of chronic rhinosinusitis: cyst of the maxillary cavity, choanal polyp, odontogenic cause, foreign body, unilateral choanal atresia, deviation of the nasal septum.[3]

Classification

- according to localization: unilateral, bilateral, polysinusitis, pansinusitis;
- according to duration: acute (up to 3 weeks), subacute (3 weeks to 3 months), chronic (over 3 months).[3]

Clinical picture

- typical two-phase course of a cold disease (development 1-2 weeks after a cold disease);
- headache worse when bending forward;
- upper jaw toothache;
- purulent discharge from the nose, obstructed nasal passage, impaired sense of smell;
- hoarseness, cough;
- general fatigue, subfebrile to febrile;
- insufficient response to decongestant treatment.[4]

Complications

- local: empyema (cavity filled with pus), mucocele (cavity filled with thick mucus);
- ostitis, osteomyelitis;
- orbital: orbitocellulitis, phlegmon or abscess of the orbit;
- intracranial: meningitis, subdural empyema, encephalitis, brain abscess, cavernosal thombophlebitis.[4][3]

Diagnostics

- ENT examination, diaphanoscopy, X-ray in semi-axial projection, CT cavity.[4]
- in the laboratory findings for bacterial sinusitis, we find leukocytosis with neutrophilia, elevation of CRP
- in indicated cases, a punctate from the mouth of the affected cavity can be cultured during endoscopy, the usual culture examination of a swab from the nose or throat is not beneficial[5]

Therapy

- idle mode;
- antibiotics: : aminopenicillins, possibly potentiated against beta-lactamase (Amoxicillin), in case of allergy to penicillins, macrolides (Azithromycin, Clarithromycin) and cephalosporins II. generation (Cefuroxin axetil, Cefaclor, Cefprozil). The basic filing period is 10 days and can be extended up to 15 days in indicated cases.[3]
- supportive treatment: mucosal decongestion (nasal drops and oral decongestants), reflex heating of the arms or lower limbs in a water bath;
- peracute course and retention of pus – puncture of the maxillary cavity or external drilling of the maxillary cavity.[4]

Links

Related Articles

- Rhinitis
- Rhinitis acute

References

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