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Contemporary diagnosis of rhinosinusitis in children

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Abstract

Background: Inflammatory disease of the paranasal sinuses, due to its high incidence in the nosological structure of morbidity, is a constant problem of modern otorhinolaryngology. The purpose of this study was to assess the importance of modern investigative methods for establishing the diagnosis in children with inflammatory rhinosinusitis.

Material and methods: The study was conducted on a group of 55 children, aged 4 to 18 years, diagnosed with inflammatory rhinosinusitis, hospitalized during the 2017-2020 years within ENT Department of *Emilian Cotaga* Republican Clinical Hospital for Children, Chisinau. The retrospective analysis of the data, retrieved from the clinical observation sheets and their attached documents, as well as from inpatient surgical protocols, during the years 2017-2020, was carried out.

Results: The applied diagnostic methods were as following: optical endoscopy, rhinomanometry, acoustic rhinometry, mucociliary clearance, computed tomography.

Conclusions: The study revealed that computed tomography and optical endoscopy provide an accurate mapping of rhinosinusal structures. Nowadays, inflammatory rhinosinusitis is definitely diagnosed by highly accurate methods, namely the optical endoscopy and computed tomography that are "the gold standard". The functional tests such as rhinomanometry and acoustic rhinometry are used to assess permeability and endonasal geometry, as well as evaluation of respiratory function in children with rhinosinusitis. The mucociliary nasal clearance plays a major role in modern diagnostic algorithm, being an essential index in assessing the functional status of the nasal mucosa and performing the protective function.

Key words: paranasal sinus, rhinosinusitis, children, diagnosis, investigation.

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