



Macroscopic findings during endoscopic sinus surgery for chronic rhinosinusitis in children



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ABSTRACT

Aim: Endeavor to intraoperative macroscopic evaluation of changes in children with CRSs. Analysis of the type and incidence of pathological changes observed macroscopically during FESS was undertaken as well as an parallel attempt to correlate the level of inflammation markers with severity of disease.

Materials and methods: Retrospective analysis of case records of 153 patients of the Department of Pediatric Otolaryngology, Medical University of Warsaw, hospitalized between 2010 and 2013. During that time 106 patients with a diagnosis of chronic maxillary sinusitis required surgical intervention. 102 children (avg-aged 11.5 years) were qualified to functional endoscopic surgery. The youngest patient was 3 years old and the oldest 18. 26 patients presented the polypoid lesions of sinuses or nasals. At 19 confirmed the coexistence of sinus polyps with nasal polyps.

Results: 76 patients had oedematous-inflammatory lesions and 26 polypoid. Among the group of listed above 26 children, 19 had either sinuses or nasal polyps. 15% children with polyps were diagnosed with cystic fibrosis and 8.0% with asthma. A common deviation in the results of morphology in children with CRSs is higher level of monocytes. Inflammation markers within the population of FESS qualified children were low.

Conclusions: (1) Oedematous-inflammatory lesions are frequently intraoperatively identified. (2) The CRSs without polyps is the common type of chronic sinusitis in children. (3) Nasal polyps often coexist with sinus polyps. (4) If nasal polyps are found in pediatric population then diagnosis of CF, allergy and GERD should be considered. (5) Markers of inflammation in CRSs are low.

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1. Introduction

The chronic sinusitis issue within the pediatric population is quite popular in the literature. The wide variety of information on microbiology, diagnosis or treatment are opposite to the relatively short experience of endoscopic surgery in pediatrics. Endeavor to intraoperative macroscopic evaluation of changes in children with CRSs. Analysis of the type and incidence of pathological changes observed macroscopically during FESS was undertaken as well as an parallel attempt to correlate the level of inflammation markers with severity of disease.

2. Materials and methods

Retrospective analysis of case records of 106 patients of the Department of Pediatric Otolaryngology, Medical University of Warsaw, hospitalized between 2010 and 2013. During that time 106 patients with a diagnosis of chronic maxillary sinusitis required surgical intervention. 102 children (avg-aged 10.4 years) were qualified to functional endoscopic surgery (Fig. 1). The youngest patient was 3 years old and the oldest 18. 26 patients presented the polypoid lesions of sinuses or nasals. At 19 confirmed the coexistence of sinus with nasal polyps. There was one choanal polyp and onefold change of maxillary sinus. Every patient had CT diagnosis done (Figs. 2 and 3). Furthermore the results of a patient's blood test (morphology, CRP and ESR) were analyzed searching for statistically significant deviations. Samples were taken not later than 7 days prior to a surgery.

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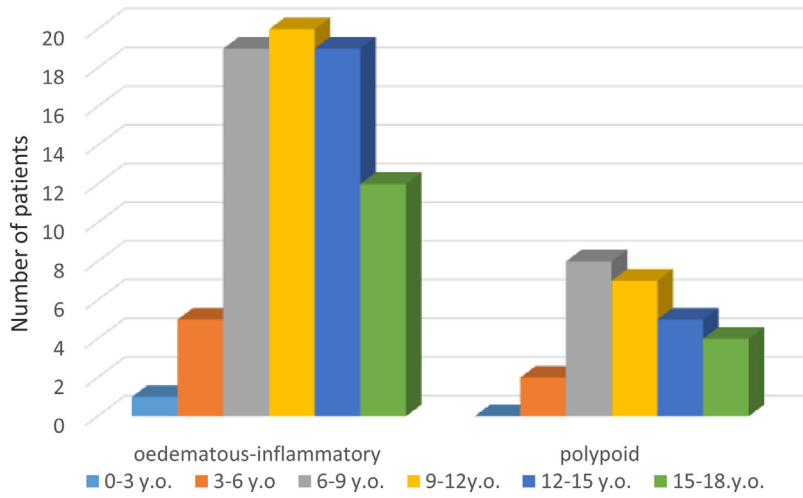


Figure 1. Patient's age.

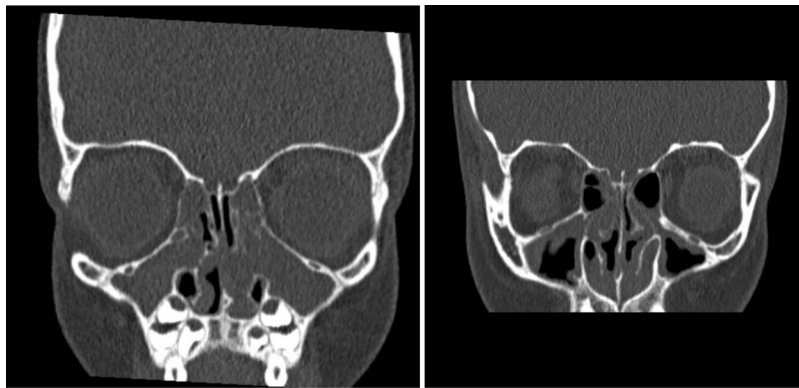


Figure 2. CT scans of patients with chronic sinusitis.

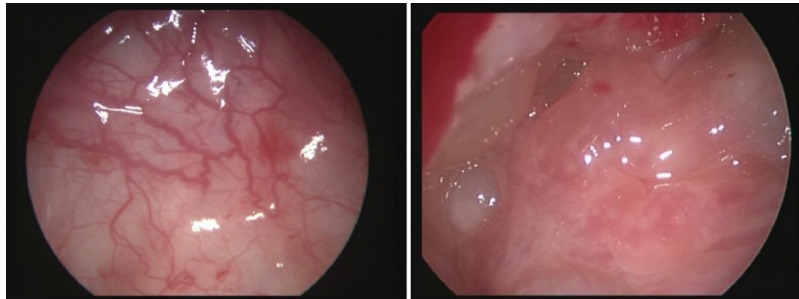


Figure 3. Oedematous-inflammatory lesion of the maxillary sinus.

3. Results

76 patients had oedematous-inflammatory lesions (Fig. 4) and 26 polypoid (Figs. 5 and 6). Among the group of listed above

26 children, 19 had either sinuses or nasal polyps. 15% children with polyps were diagnosed with cystic fibrosis (Fig. 7). They were the youngest in that group of patients (4, 4, 7, 8 years). Parallel – 8.0% children with polypoid changes had diagnosed asthma

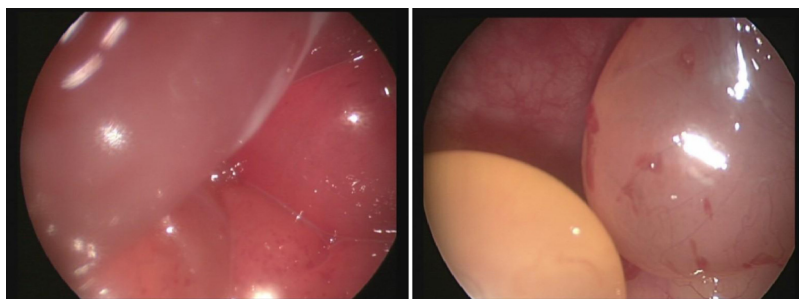


Figure 4. Polypoid changes of the maxillary sinus.

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