

ASSESSMENT OF INFLUENCE OF PACKING USED IN POSTOPERATIVE PERIOD FOR CHILDREN THAT UNDERWENT PEDIATRIC ENDOSCOPIC SINUS SURGERY

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Summary

Introduction. One of the most common complication after pediatric functional endoscopic sinus surgery are nasal cavity adhesions. Apart from treatment methods applied, the medical packing used after surgery may have an influence on the above mentioned adhesions. The basic medical packing used for years in otolaryngology is gauze seton. This packing has applications in both otosurgery and rhinosurgery. In recent years alternative methods of nasal cavities tamponing have appeared, including gel packings with carboxymethylcellulose.

Aim. The aim of this study is to compare the effects of using seton with carboxymethylcellulose for patients that underwent pediatric endoscopic sinus surgery.

Patients and methods. The prevalence of adhesion and infections during the postoperative period after PESS were analyzed in 170 children that underwent surgery in ENT Clinic at Medical University of Warsaw between 2007 and 2011. The inclusion criteria for the analyzed group were diagnosed chronic nasosinusitis and sinusitis, as well as undergoing Pediatric Endoscopic Sinus Surgery. Children who had the Balloon Sinuplasty method operation previously were excluded from the trial examination group. The patients were divided into two groups – those to whom seton was administrated and those for whom gel packing was used.

Conclusions. The differences in the process of healing while using gel and seton packing were presented.

Key words: postoperative care, chronic sinusitis, functional endoscopic surgery

Functional endoscopic surgery is the fundamental method of treating chronic rhinitis and sinusitis with stenosis of the physiological sinus ostium. The surgery success depends not only on the surgery technique but also on the patient preparation and the postoperative period, including the medical packing which was used. The traditional packing used in the nasal cavity area is seton. In recent years alternative methods of nasal cavities tamponing have appeared, including gel packings with *carboxymethylcellulose*.

Functional endoscopic nasal sinuses endoscopy is a safe method and local or general complications are rare. One of the most common local complications are internasal adhesions and epistaxis.

The objective of our study was to investigate the influence of the medical packing used on the prevalence of the indicated types of complications.

PATIENTS AND METHODS

Retrospective research of 175 patients (96 boys, 79 girls) was conducted. Conservative treatment of chronic rhinitis and sinusitis did not bring satisfactory effects for the studied patients, so surgical procedure was performed. Children suffering from chronic sinusitis with

stenosis of the physiological sinus ostium were qualified for surgical treatment. Their condition was confirmed by computed tomography of sinuses after at least 8 weeks of lasting symptoms.

The patients were divided into 2 groups according to the medicinal packing used: I – patients whose nasal cavity was tamponed with gel packing after the treatment; II – patients for whom packing with gauze seton was administrated after the treatment. Both age and sex of the patients, as well as the scope of treatment, including surgery in the area of both maxillary, sphenoid, ethmoid and frontal sinuses, were taken into consideration for each group. The exclusion criterion for qualifying to one of the groups was sinuplasty using the Balloon Sinuplasty method. After surgical procedure seton was removed from all patients in the second postoperative day. Moreover, taking sympathomimetic medicine via nasal route was recommended. Antibiotic therapy and corticosteroids used locally were also administrated in special cases. Data acquired during patient's follow-up appointments was used for the assessment of the prevalence of postoperative complications related to adhesions and epistaxis.

Table 1. Comparison of studied groups.

	Number of patients	Age median	Adhesions	Bleedings
Group I	65	11	7.9%	1.6%
Group II	100	11	23.6%	4.7%

RESULTS

For systemic follow-up visits 62 (95%) out of 65 patients from group I and 107 (97%) out of 110 patients from group II came during the period of 24 months after the surgery. Both studied groups did not statistically differ in terms of ailment duration, severity of inflammatory process or the prevalence of polyps and anatomic problems. The patients' age was between 4 and 17 years, and the age median was 11 years, both in group I and II. The scope of surgery in group I consisted of most commonly left and right maxillary sinuses, 43 out of 65 (66%) performed surgeries. In group II, 78 out of 110 (71%) patients underwent only left and right maxillary sinuses surgeries.

The follow-up postoperative examination showed the prevalence of adhesions between middle nasal concha and lateral nasal wall in 5 (7.9%) patients from group I and 26 (23.6%) patients from group II. During the follow-up postoperative examination epistaxis was identified in 1 (1.6%) patient from group I and 5 (4.7%) patients from group II.

CONCLUSIONS

The results of the study indicate that for patients that underwent endoscopic sinus surgery with the use of

medical packing in the form of gauze seton the complications occurred more often than in the case of patients for whom gel packing was used. The complications were adhesions in nasal cavity and epistaxis. No correlation between the scope of surgery and local complications was observed among the studied patients. □

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