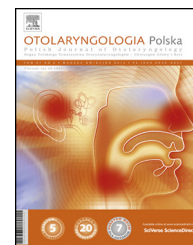


Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

journal homepage: [www.elsevier.com/locate/otpol](http://www.elsevier.com/locate/otpol)

Original research article/Artykuł oryginalny

## Unilateral pathological lesions of paranasal sinuses removed by endoscopic surgery



*Jednostronne zmiany patologiczne z zatok przynosowych usunięte metodą chirurgii endoskopowej*

Jarosław Miłośki, Piotr Pietkiewicz, Joanna Urbaniak, Jurek Olszewski\*

Department of Otolaryngology and Laryngological Oncology, 2nd Chair of Otolaryngology, Medical University of Lodz, Head: Jurek Olszewski, MD, PhD, Lodz, Poland

### ARTICLE INFO

#### Article history:

Received: 19.06.2013

Accepted: 03.07.2013

Available online: 05.07.2013

#### Keywords:

- Pathological lesions
- Paranasal sinuses
- Endoscopic surgery

#### Słowa kluczowe:

- zmiany patologiczne
- zatoki przynosowe
- chirurgia endoskopowa

### ABSTRACT

**Introduction:** The aim of this study was to analyze the incidence and nature of unilateral pathological lesions of paranasal sinuses in patients who had endoscopic sinus surgery performed in ENT. **Materials and methods:** In the years 2006–2011 endoscopic sinus surgery for unilateral pathological lesions of paranasal sinuses was performed in 1847 patients (838 women and 1009 men). The enrollment of patients was based on the findings of otolaryngological clinical and subjective examinations, assessment of the paranasal sinuses on three-dimensional CT scans, and laboratory examinations. Based on the analysis of medical history data, including gender, age, the type of surgical procedure performed, and histopathological findings the cases were finally analyzed. **Results:** Pathological lesions of the paranasal sinuses were localized on the left side in 132 (57%) patients, and on the right side in 100 (43%) patients. Of the 232 patients with unilateral pathological changes, 41.8% subjects underwent endoscopic sinus surgery for polypotic changes in the ethmoid and maxillary sinuses; 28.4% for the maxillary sinus; 10.8% for the ethmoid, maxillary and frontal sinuses; and 8.6% patients for all paranasal sinuses on one side. The number of operations of only one sinus was considerably lower: sphenoid sinus, 4.7%; ethmoid sinus, 2.2%; and frontal sinus, 1.7% patients. The histopathological analysis of unilateral pathological lesions removed by endoscopic surgery showed chronic paranasal sinusitis with polyps in 56.5% patients; chronic paranasal sinusitis in 22.8% patients; and maxillary sinus cyst was confirmed in 11.6% patients. In 5.1% patients inverted papilloma was diagnosed and in 2.2% patients the presence of osteoma was found. **Conclusions:** Unilateral paranasal pathological lesions, leaving aside rather typical maxillary sinus cysts, require a particularly thorough pre-operative diagnosis and a precise histopathological assessment.

© 2014 Polish Otorhinolaryngology - Head and Neck Surgery Society. Published by Elsevier Urban & Partner Sp. z o.o. All rights reserved.

\* Corresponding author at: Klinika Otolaryngologii i Onkologii Laryngologicznej II Katedry Otolaryngologii UM, ul. Żeromskiego 113, 90-549 Łódź, Poland. Tel.: +48 426393580; fax: +48 426393580.

E-mail address: [jurek.olszewski@umed.lodz.pl](mailto:jurek.olszewski@umed.lodz.pl) (J. Olszewski).

## Introduction

Endoscopic nasal and paranasal sinus surgery is a safe and effective method that allows removal of pathological lesions in the nasal cavity and paranasal sinuses. The commonly held preference for conservative treatment for chronic inflammatory lesions, as well as for nasal and paranasal sinus polyps does not diminish the importance of surgical treatment. Deciding on surgery depends on the progress of the inflammatory lesions, the extent to which openings into paranasal sinus and nasal cavity are blocked or the patient's response to conservative management [1-3].

The development of endoscopic sinus techniques stems from the progress of new technologies, especially from scientific advances in the area of the pathophysiology of paranasal sinuses and the development of a new concept of the basic pathomechanism responsible for the development of paranasal sinusitis. The development of chronic paranasal sinusitis depends on a number of different factors, of which viral and bacterial infections, allergies, the environmental impact of irritating agents (exhaust fumes, tobacco smoke), anatomical variations in the septum or nasal lateral wall, and gastro-oesophageal reflux disease appear to be the most important. They lead to persistent swelling of the ostium of the paranasal sinus, making ventilation and drainage difficult, thus facilitating the penetration of bacteria into the sinus lumen. Nasal polyps present chronic inflammatory disease of the nasal mucosa, manifested by swelling, interstitial lesions and infiltrations of specific inflammatory cells [4-6].

The number of publications on the role of disorders with an immunological basis in the etiology of chronic paranasal sinusitis has recently been growing. It is thought that the effect of exogenous environmental factors may lead to the development of this disease for those who are genetically predisposed [7]. There have been numerous studies aimed at finding genetic markers for risk. Such markers in this case may be polymorphisms of gene coding proteins responsible for the development of inflammatory processes. Paranasal sinusitis is probably induced by the activation of the immune system through mobilization and proliferation of T cells, synthesis of cytokines and activation of chronic and destructive inflammatory processes in the mucosa.

The large number of general factors affecting the mucous membrane and leading to this pathology means that the development of bilateral lesions seems to be a natural process. On the other hand, if the major pathomechanism by which inflammation develops is regarded as the ostium-ductal complex, the unilateral appearance of changes of inflammatory etiology in the paranasal sinuses is logical and understandable [8-11].

The aim of this study was to analyze the incidence and nature of unilateral pathological lesions of paranasal sinuses in patients who had endoscopic sinus surgery performed in the Department of Otolaryngology and Laryngological Oncology, Medical University of Lodz.

## Materials and methods

In the years 2006-2011 endoscopic sinus surgery for unilateral pathological lesions of paranasal sinuses was performed in 1847 patients (838 [45.4%] women, aged 15-82 and 1009 [54.6%] men, aged 17-87; mean, 48.6 years) admitted to the Department of Otolaryngology and Laryngological Oncology, Medical University of Lodz.

The patients were enrolled on the basis of the findings of otolaryngological clinical and subjective examinations, assessment of the paranasal sinuses on three-dimensional CT scans, and laboratory examinations. All surgically removed tissues were referred to the pathological laboratory for histopathological examination. Based on the analysis of medical history data, including gender, age, the type of surgical procedure performed, and histopathological findings the cases were finally analyzed. Prior to the operation each patient had a seton saturated with 2% solution of xylocaine and ephedrine (1:1) placed in the nose. The 0, 30, 45 and 70 degrees endoscopes with visual trajectory and debrider were used in endoscopic sinus surgery. Each time the paranasal sinuses in which CT imaging documented the presence of unilateral pathological lesions were qualified for surgical treatment. The type of surgical treatment, as regards individual sinuses, was modified intra-surgically, depending on the changes in the lumen inside the affected sinuses. Tamponade was adopted to the extent of the incision, using setons in rubber gloves, merocel dressings 8-10 cm long for the tamponade of the whole nasal duct and 4-5 cm long for the tamponade of the middle nasal meatus or the space after removal of the cells of the ethmoid sinus. The post-operative management involved the application of mucosal decongestants for 7-10 days and targeted antibiotic therapy when necessary. After mucosal healing nasal glyocorticosteroids were being administered for three months. The patients in whom pathological lesions were diagnosed in one or in all unilateral paranasal sinuses were selected for the analysis.

## Results

Pathological lesions of paranasal sinuses on either side were diagnosed in 232 patients, constituting 12.6% of all the patients who underwent endoscopic sinus surgery (Table I).

Pathological lesions of paranasal sinuses localized on the left side were found in 132 (57%) patients, including 58 (43.9%) women and 74 (56.1%) men, and on the right side in

**Table I - Incidence of unilateral and bilateral pathological lesions in patients who underwent endoscopic paranasal sinus surgery**

Pathological lesions of paranasal sinuses	Women		Men		Total n
	n	%	n	%	
Bilateral lesions	741	45.9	874	54.1	1615
Unilateral lesions	97	41.8	135	58.2	232

Download English Version:

<https://daneshyari.com/en/article/3170921>

Download Persian Version:

<https://daneshyari.com/article/3170921>

[Daneshyari.com](https://daneshyari.com)