# GEORGE EMIL PALADE UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE AND TECHNOLOGY FROM TÂRGU MUREŞ

### DOCTORAL SCHOOL

# CURRENT ISSUES IN THE SURGICAL TREATMENT OF NOSE OBSTRUCTION IN NON-SPECIFIC CHRONIC RHINITIS AND NASAL SEPTAL PATHOLOGIES

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## **INTRODUCTION**

Septal deviations and non-specific chronic rhinitis in the case of the ENT Department of the Târgu Mureș County Emergency Clinical Hospital, gain importance not only for adopting the most appropriate conservative therapeutic attitudes but especially for the various surgical strategies applicable to each case. This is the only way to achieve therapeutic success and maximum rehabilitation of the patient suffering from a "nasal respiratory pathology".

#### **CURRENT STATE OF KNOWLEDGE**

Anatomy of the nose: nasal pyramid consists of three parts, three edges, a basis and a tip; two nostrils divided by the nasal septum

The mucosa (pituitary) lines the walls of the nasal fossa and paranasal sinuses: vascularization of the nasal fossae is provided by the external and internal carotid arteries, venous vascularization is collected in the facial area, internal maxillary venous plexus and ophthalmic vein, part accesses the upper longitudinal sinus. The lymphatic system follows a double collection path: anterior - the anterior lymphatics are directed to the submaxillary lymph nodes; posterior - directed towards the Eustachian tube and here it is divided into three groups: upper, middle and lower. Innervation -vegetative, sympathetic and parasympathetic; nose physiology - respiratory function; nasal flow with bacteriostatic properties, heating and humidification of air.

Nose physiology: defense function, phonation function, olfactory function, reflex function. Methods of examination of the nasal function: rhinomanometry, four-phase rhinomanometry (4PR), acoustic rhinometry, nasal spirometry / rhinospirometry, imaging and other diagnostic methods of rhino-sinus pathology such as conventional radiography, sinus ultrasonography, sinus computed tomography.

Nasal and sinus pathology: nasal septal deviations, acute rhinosinusitis, chronic rhinitis, nasal polyposis, nasal and nasal-sinus tumors.

## STUDY I - THERAPEUTIC NOVELTIES IN HYPERTROPHIC LOWER NOSE CORNET SURGERY

WORKING HYPOTHESIS / OBJECTIVES: comparison of the use of the intraturbin with the extraturbin microdebrider in the inferior turbinoplasty,

MATERIAL AND METHOD

Retrospective longitudinal clinical study was performed over a period of 5 years (2014-2018) representing cases from the ENT clinic of the Târgu Mureş County Emergency Clinical Hospital.

The inclusion criteria of patients in the study: anamnesis, ENT clinical examination, general clinical examination, biological and imaging examinations, histopathological examinations, type of intervention, treatment

- The surgical technique of turbinoplasty with microdebrider was applied on a group of 690 patients with an average age of 44.02 years
- An evaluation made at 3 and 6 months postoperatively, the VAS score showed a significant improvement in nasal obstruction after both techniques were applied, without any difference between the two groups of patients evaluated (p = 0.068 and p = 0.825).

#### CONCLUSIONS

Both intraturbin and extraturbin turbinoplasty with microdebrider are equally effective, both with low operative time and extremely low intraoperative and postoperative hemorrhage.

## STUDY II - THERAPEUTIC CONSIDERATIONS IN THE PATHOLOGY OF THE NASAL SEPTAL DEVIATIONS

OBJECTIVES: Comparative evaluation of the results obtained by performing endoscopic septoplasty techniques, compared to the classical one.

## MATERIAL AND METHOD

A longitudinal retrospective study was performed on a group of 92 patients diagnosed with nasal septal deviation (out of a total of 690 patients with rhinosinusal pathology), in the period 2014-2018.

# SURGICAL TECHNIQUE OF ENDOSCOPIC SEPTOPLASTY

CONCLUSIONS: the endoscopic septoplasty technique offers a significant improvement of the nasal respiration by significantly reducing the nasal obstruction ensuring a better intraoperative visibility than the classical technique

# STUDY III - ULTRASONOGRAPHIC EVALUATION USED IN RHINOSINUSAL PATHOLOGY

Objectives of the study - to demonstrate the usefulness of ultrasonography in the current rhinological examination but also for the outpatient evaluation of patients with inflammatory rhino-sinus disorders before they have a CT scan.

MATERIAL AND METHOD: a retrospective study, over a period between 2014-2016, a batch of 81 patients with rhinosinusal symptoms, rhino-sinus ultrasonography, using an Acuson x300 ultrasonograph, was used mode B ultrasonography, using convex probe for soft parts on the maxillary and frontal sinuses

CONCLUSIONS - ultrasonography is a non-invasive method that could be a much more accessible alternative in the imaging examination of nasal and naso-sinus pathology.