RESECTION IN THE MIDDLE NASAL MEATUS

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I wish to present our experiences obtained in the Clinic of Otorhinolaryngology in Belgrade with an original surgical method for the removal of nasal polypi. This method has been successfully carried out in our Clinic during many years. Podvinec has in 1930, described this method for the first time.

His studies on the formation of nasal polypi are based on an intimate knowledge of the anatomic structures of the nose, as well as on the aetiological factors responsible for the development and recurrences of polypi. He confirmed in his paper Zuckerkandl's anatomical findings namely that nasal polypi always take their origin from the same determined places. They are the ostia of the maxillary sinuses, the lips of the semilunar hiatus, the ostia of the ethmoidal cells, the ethmoidal bulla, the ostia of the sphenoidal and frontal sinuses, and the fold which spreads from the anterior pole of the middle nasal turbinal to the lateral wall. In all these places there are duplicated elevations of the nasal mucous membrane, or the nasal and sinuseal part of the mucous membranes lining the nose and the sinus lie upon one another without any underlying bony structure. Also in the lips of the hiatus semilunaris linings of the nasal mucous membrane lie upon one another. Podvinec found that nasal polypi consist of duplicated mucosa which has become greatly swollan and infiltrated. In his opinion, the factors which provoke and maintain chronic inflamation (infection, allergy, etc.) exert their noxious effects on both sides of the duplicated mucous membrane. The absence of the underlying bony wall at various levels of the mucous membrane represents a predisposing factor for their swelling and the formation of polypi. It is certain that their formation may be expected where the duplicated fold are the largest, and these are in the first order the lips of the semilunar hiatus and the ostia of the maxillary sinus.

None of the usual surgical methods are designed to remove with the polypi also the duplicated folds. In most cases the polypi are removed with slings. They can remove only the distal parts, but the duplicated folds remain in their sites, especially in the maxillary aperture. Even with the evacuation of the maxillary sinus these duplicated folds around the ostia will be left intact. Therefore, a surgical technique had to be found which would remove not only the polypi, but also the duplicated folds from which polypi have already formed, as well as those which may be responsible for recurrences. By employing "the resection in the middle nasal meatus" the number of recurrent cases was decreased to the minimum. If recurrent cases occurred, it was the matter of a polypus, which developed from the same small duplicated fold or from the remnants of a larger fold which had not been well resected in the previous operation.

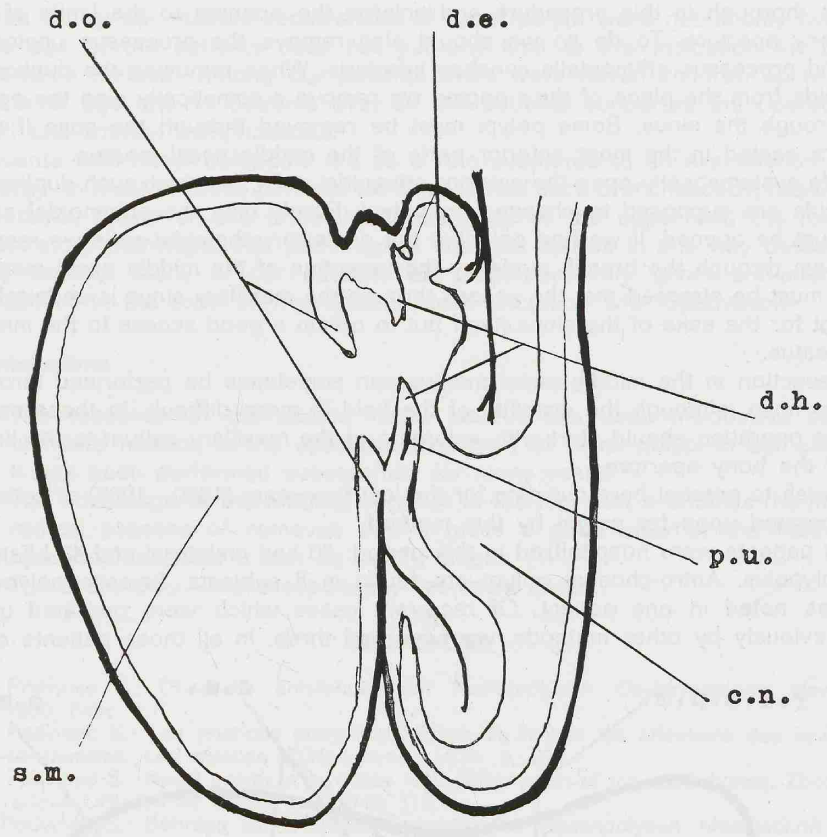

Figure 1. c.n. - cavum nasal
d.o. - duplicaturae mucose sinus maxillaris
s.m. - sinus maxillaris
p.u. - processus uncinatus
d.e. - duplicaturae mucose ostia an cellue ethmoidalis
d.h. - duplicaturae the lips of the semilunar hiatus

By this technique we reach the middle nasal meatus and the polypi through the maxillary sinus, by the Caldwell-Luc approach. Occasionally we perform a transnasal operation.

After the removal of the anterior wall of the maxillary sinus we open the medial wall. This bony wall with its mucosa is removed all along the lower nasal meatus until the lower turbinate is visible from its anterior to its posterior end. Then the lower nasal turbinate is cut across with a pair of scissors. After this is done we push into the nose the anterior part of the turbinate while the posterior part of it is pushed into the sinus. In this way we have formed a large access to the duplicated fold in the middle nasal meatus.

Then with different nasal forceps we evacuate the duplicated folds. We remove all of them and the tiny bony plates which we find there. We must

be thorough in this procedure and enlarge the opening to the limits of the bony apertura. To do so we should also remove the processus uncinatus and processus ethmoidalis conchae inferioris. When removing the duplicated folds from the place of their origine we remove automatically also the polypi through the sinus. Some polypi must be removed through the nose if they are seated in the most anterior parts of the middle nasal meatus.
We systematically open the anterior ethmoidal cells, on which such duplicated folds are supposed to change into polypi. Rarely only the sphenoidal sinus must be opened. If we find polypi in the posterior ethmoidal cells we remove them through the breach made by the resection of the middle nasal meatus. It must be stressed that the access through the maxillary sinus is undertaken, not for the sake of the sinus itself but to obtain a good access to the middle meatus.
Resection in the middle nasal meatus can sometimes be performed through the nose, although the visibility of the field is more difficult. In these cases the operation should start with enlarging of the maxillary ostium to the limits of the bony aperture.
I wish to present here our data for the last five years (1960—1965) of patients operated upon for polypi by this method.
78 patients were hospitalized in this period: 30 had unilateral and 48 bilateral polyposis. Antro-choanal polypi are found in 8 subjects. Juvenile polyposis was noted in one patient. Of recurrent cases which were operated upon previously by other methods, we have had three. In all those patients ope-

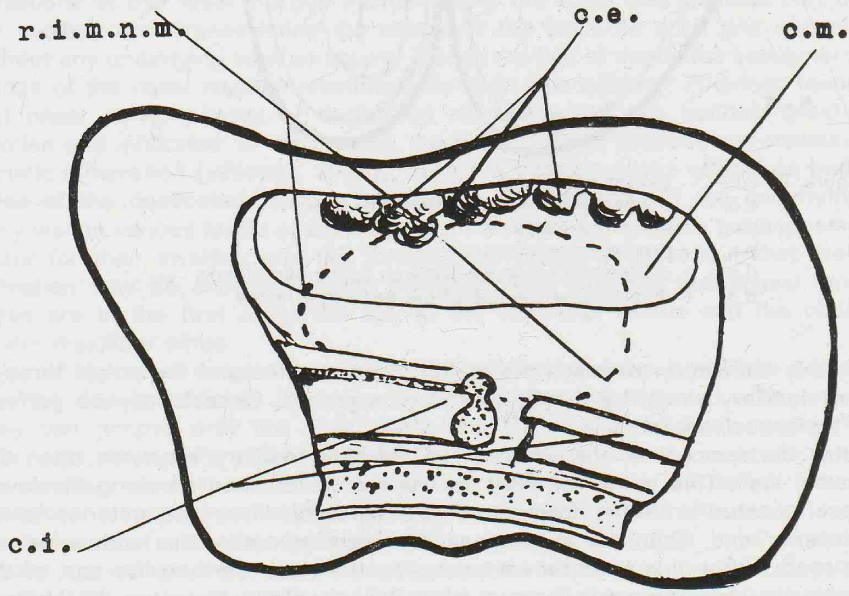

Figure 2. c.i. - cut the concha nasalis inferior
c.m. - the concha nasalis media
c.e. - the cellulae ethmoidales
r.i.m.n.m. - resection the middle nasal meatus

rated on by our method recurrences of nasal polypi were noted only twice. The age of the patients does not put any limit to the indication for this operative method. Among our patients there were seven children up to 14 years of age and 14 patients over 60. All patients supported the operation well and without complications.

Patients with nasal polyposis are as a rule subjected to an examination for allergy. In most of these patients we also carried out a bronchoscopy, because we think, based on the principle of the unity of the upper and the lower respiratory pathways, that pathological changes can be in this way detected and treated. Many of our patients are postoperatively given anti-allergic treatment in the form of non-specific desensitization with Subtivaccin.

Conclusions

1. The resection in the middle nasal meatus has been introduced as a standard method in the operative treatment of nasal polypi in our clinic. It has been performed successfully for many years.
2. The advantage of the method consists in the fact that it enables the most radical process of removal, that it gives a good view of the field of operation and that it can be easily taught.
3. There are only very exceptionally recurrent cases.

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