SURGICAL TREATMENT OF VASOMOTOR RHINITIS

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In studying vasomotor rhinitis it is important to emphasize two facts: The nasal mucous membrane possesses general characteristics of the respiratory mucous membrane, the only difference being, that some elements are more strongly and more numerously represented, and some, like cavernous tissue, are the specific characteristic of the nasal mucous membrane alone. This structure is connected with functional activity, unlike that of the other respiratory mucous membranes. Secondly, constantly fluctuating cycles of more or less functional activity of the nasal conchae, as well as continuous adaptation to external environment have conditioned a very rich innervation in which the vegetative nervous system plays a special role. The importance of this system is also shown by the location of the sphenopalatine ganglion, a vegetative centre, in the nose.

As the function of the autonomic nervous system is most closely connected with the endocrine system, this neuro-endocrine apparatus has a very important rôle in the development of all physiologic activities of the nasal mucous membranes. It appears that the parasympathicus is the more sensitive portion, which reacts from the very beginning and leads to parasympathicomimetic reaction. That is why the most different causes can result in the same clinical picture of vasomotor rhinitis. Our investigations have shown that most diverse factors can lead to this disturbance with the same clinical, microscopic and histological picture and only by a detailed analysis can the real cause be deduced.

A whole series of local nervous disturbances in the nasal area, whose pathophysiological background is not yet quite clear to us, play very important rôles in vasomotor rhinitis. This is the reason that even to-day in many cases we endeavour, with various therapeutic means, to establish a status of relative equilibrium in the nasal mucous membrane. There is a large group of vasomotor rhinitis which we term "psychosomatic". The basic cause of such disorders often cannot be found. Certain practitioners in the past, in such cases performed multiple ignipunctures of the nasal conchae. This practice lead to functional incapacity of the nasal membrane. Because of this we have tried to find a better method by which the hyperactivity of the nasal mucous membrane could be checked and by which a less active and more tolerable condition could be produced. Some years ago we recommended dripping novocain solution into the nose in all such cases, because the older method

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of cocainisation of the ganglion sphenopalatinum was either unsuccessful or, in some cases, dangerous. For the same reason, in 1961 and 1962, Golding-Wood recommended his technic of neurectomy of the greater superficial petrosal or vidian nerve in stubborn cases of vasomotor rhinitis in order to ablate the parasympathic portion of the innervation, because he believed that parasympathetic preponderance plays a decisive role in vasomotor rhinitis. He reported very good results in 93 per cent of cases which he had followed as long as five years. The original method of vidian neurectomy, according to Golding-Wood, is described in the Journal of OL (1962).

We were not inclined to perform neurectomy of the petrosal nerve for relief of vasomotor rhinitis, because this operation required the opening of the cranium and our patients would not consent to this procedure. We preferred to approach the vidian nerve extracranially, although this route may seem somewhat more difficult for the surgeon.

In trying the original method of Golding-Wood in the cadaver we developed certain modifications and improvements, which were taken advantage of in our first surgical operation of this kind. The posterior wall of the maxillary sinus is removed medially and superiorly, and at the same time the posterior portion of the medial wall is removed as well. The internal maxillary artery is then identified. It can be recognized easily by its pulsations and can be isolated without touching the remaining contents of the pterygomaxillary fossa. The artery is followed as far as its entrance into the lateral nasal wall. Just above its entrance into the nose the sphenopalatine ganglion may be recognized. This structure can be easily isolated and has the shape of a lens. The lateral sensitive branch of the ganglion is not touched and the posterior branch which is actually the vidian nerve is devided. In our cases we have also done limited coagulation of part of the ganglion. Our modification of the Golding-Wood technic has the following advantages; first, the contents of the pterygomaxillary fossa need not be disturbed, which avoids bleeding; second, a very quick and easy orientation is secured because of the pulsation of the internal max. artery, which enables us to perform the operation within 15—20 minutes (Fig. 1, 2).

Up to the present we have had only two successful operations, although more than six months ago we started surgical treatment of vasomotor rhinitis. We believe that every case of vasomotor rhinitis is a syndrome of the most varying aetiology. For this reason a thorough analysis is necessary in order to ascertain, if possible, the true aetiological factor. Following this, we use conservative therapy either local or general. Only in cases where conservative treatment is unsuccessful and where the subjective disturbances of the patient are very pronounced, do we have recourse to the surgical treatment of vasomotor rhinitis.

Surgical therapy of the vegetative system has not given any lasting results as yet in periarterial sympathectomy. However, in our cases cutting of the vidian nerve and partial coagulation of the sphenopalatine ganglion has given good and permanent results, because we attack the local vegetative center itself and there is a lessened possibility of regeneration of the vegetative fibres. By excluding the vidian nerve alone, sympathic control of the blood-vessels which supply the nasal mucous membrane remains. In this way we

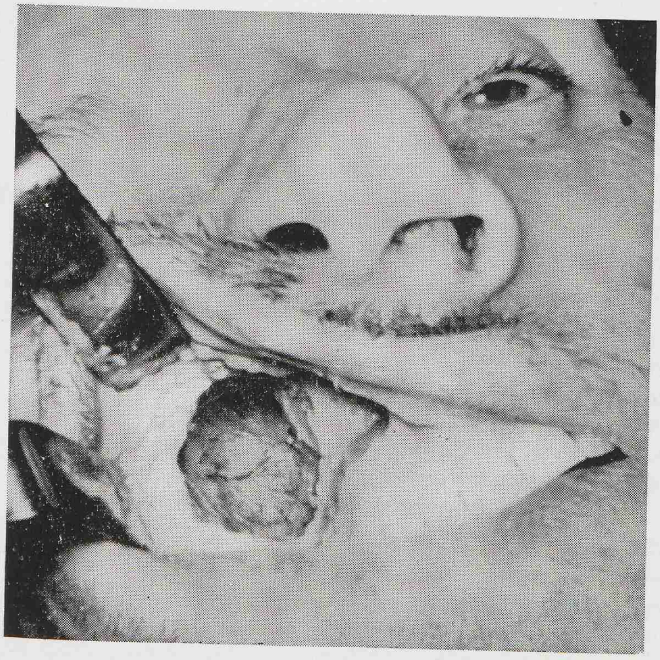

Fig. 1. The opening of the fossa pterygo-maxillaris,

L'ouverture de la fosse ptérygo-maxillaire.

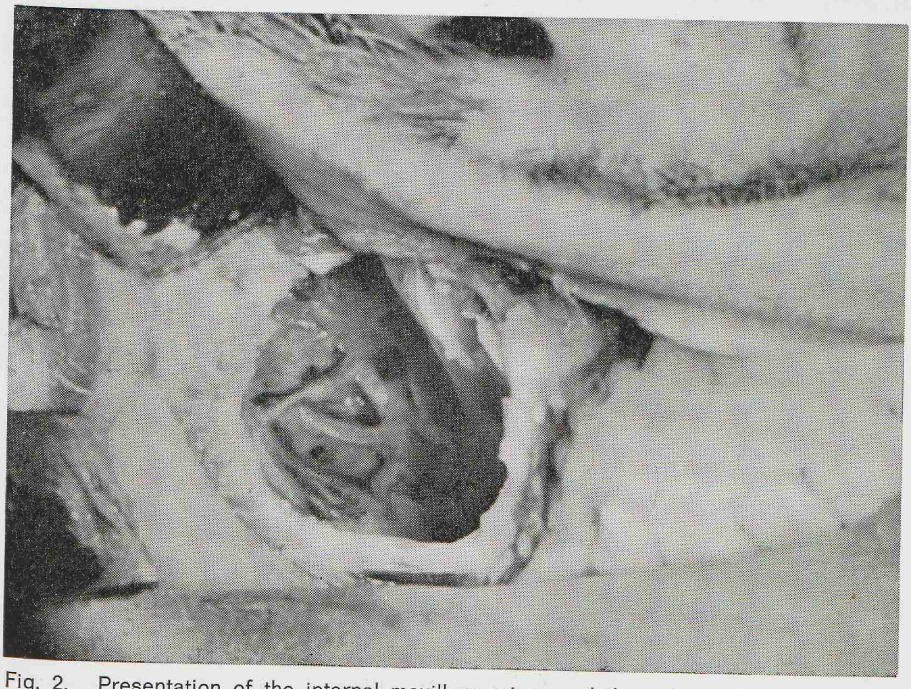

Fig. 2. Presentation of the internal maxillary artery and the sphenopalatine ganglion.
Présentation de l'artère maxillaire interne et du ganglion sphenopalatine.

do not exclude the vegetative innervation completely, but remove the undesired effect of vasodilatation and increased functioning of the mucous glands. The sensory portion of the trigeminal nerve is also left intact.

We believe that surgical therapy of vasomotor rhinitis should be considered in those cases where present-day conservative therapy is ineffective. Our final purpose must be to help the patient and to rid him of lasting and sometimes unbearable nasal-symptoms, which can have repercussions on the entire physical and psychical habitus of the patient. We then can have recourse to surgical therapy, which is functional and nonmutilating.

SUMMARY

Vasomotor rhinitis is a syndrome of many diseases whose pathognomic picture is that of parasympathomimetic reaction of the nasal mucous membranes. For this reason in such cases, where the conservative, local or general therapy has proven to the ineffective, surgical therapy should be considerated. Our modification of the Golding-Wood neurectomy of the vidian nerve has been presented.

CONCLUSION

La rhinite vasomotrice est le syndrome de beaucoup de troubles dont l'immage pathognomique est la réaction para-sympatomimetic de la membrane muqueuse nasale. C'est pourquoi, dans ces cas-là où la thérapie conservative, locale ou générale s'avère inefficient, la thérapie chirurgicale vient en considération.

Nous présentons ici notre modification de neuréctomie selon Golding-Wood du nerf vidien.

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