EVOLUTION OF OZENA SURGERY

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Ozena dates back to antiquity and was already mentioned in the Papyrus Evers around 1550 B.C. Undoubtedly several illnesses like syphilis and tuberculosis, as well as ozena in our present sense, were included in this term. Therapy was basically directed toward the elimination or masking of the foul odor and removal of crusts and pus. This did not change until the latter part of the 19th century, when direct inspection and anatomic studies allowed differentiation of the various pathology.

The surgical attempts to control ozena that have since been carried out can be divided in four groups:

1. Control of focal infection.
2. Adding moisture to the nasal cavity.
3. Control of trophoneurotic changes.
4. Narrowing of the nasal airspace.

Based on the concept that ozena is caused by foci of infection in the nasal cavity, fairly radical exenteration of the nose was done by Rouge in Lausanne in the 1870's. This concept was supported by v. Volkmann and Bardenheuer. Later, operations for infection of the paranasal sinuses were carried out. These attempts proved to be futile and increased the problems by widening the already enlarged airspace.

Wittmack tried to solve the problem by implanting the parotid duct into the maxillary sinus. This operation was also unsuccessful. Only a relatively small area in the nasal cavity is benefited from the salivary secretion and crusting and foul odor remained. In addition this operation created new problems for the pour victim of ozena. There was uncontrollable dripping from the nose during eating, which was even worse than the original condition.

Krampitz in Breslau considered ozena to be the result of trophoneurotic changes due to pathology of the cervical sympathetic nervous system. On that basis, he removed the superior cervical ganglion and obtained considerable expansion and succulence of the turbinates and disappearance of the crusting. The results are based on an observation time of 16 months and 10 months. Longterm results are not known.

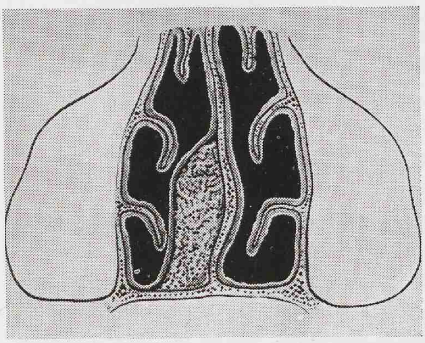
Most operations for ozena attempt to narrow the nasal cavity. The narrowing of the intranasal space is accomplished:

a. by implantation.
b. by changing the position of the intranasal structures.
c. by changing the position of intranasal structures and implantation.
d. by changing the position of intranasal structures and the structures of the external nasal pyramid combined with implantation.

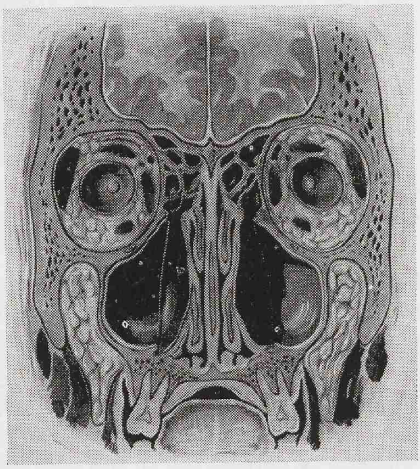
Implantations have been placed in the intraseptal space, on the nasal floor and in and around the inferior turbinate. A variety of materials have been employed: liquid and hard paraffin, vaseline, ivory, fat, cartilage, fresh and mascerated bone, plastics, blood and resected turbinates. While implantations

improved the condition to some extent and for some time, the results were far from satisfactory and with some of the materials, such as paraffin, considerable complications were encountered.

Kahler tried to narrow the nasal cavity by suturing to the septum a mucosal flap from the lateral nasal wall together with the inferior turbinate. Cholewa and Cordes recommended infracture of the turbinate.



Implant in the intraseptal space and on the nasal floor
Greffe dans l'espace intraseptal et sur le plancher du nez



Lautenschläger's ozena operation
Opération pour ozène selon Lautenschläger

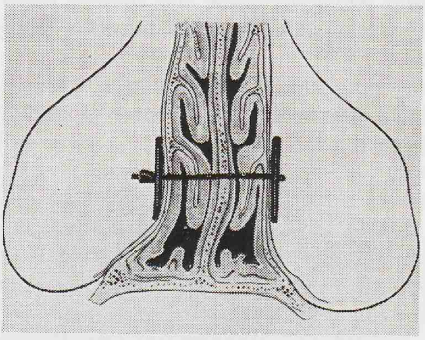
More successful was Lautenschläger's operation. He mobilized the lateral wall of the nasal cavity through the maxillary sinus and moved this wall to the nasal septum, holding it in this position by packing of the maxillary sinus and by creating adhesions between the septum and the inferior turbinate.

Hinsberg modified this operation. He secured the lateral nasal wall in its proper position, without packing the maxillary sinus, by supporting the wall with magnesium plates, held together by bronze wire. The magnesium plates were absorbed in about six months' time and the bronze wire could then be removed through the nasal cavity.

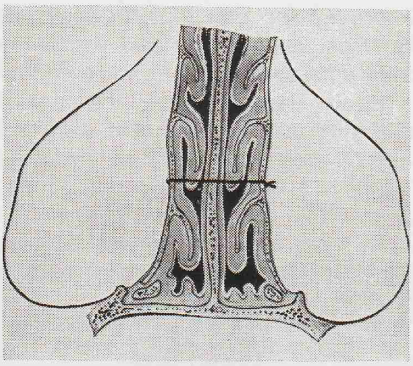
Seifert followed the same thought, employing heavy silk suture without the plate. Halle mobilized the lateral nasal wall through an incision close to the pyriform aperture.

Bourak followed a different course. Through an incision from the oral vestibule or close to the pyriform aperture, he mobilized the inferior turbinate together with the adjacent mucosa, moved the whole compound towards the septum and implanted fat into the space thus created.

While these operations were of great help to the ozena patient, not all problems were eliminated by surgery. The foul oder usually disappeared and the formation of crusts was greatly reduced and in some patients completely



Hinsberg's modification
Modification selon Hinsberg



Seifert's modification
Modification selon Seifert

terminated. As a rule there was still dryness and atrophy of the mucosa and nasal irrigation had to be continued.

The latest development in ozena surgery is the operation devised by Cottle*

The operation consists basically of three parts. First the mobilization of the inferior turbinate and the adjacent soft tissue is done as in Bourak's operation, but extending the elevation and implantation to the nasal floor. The incision is carried out in the nasolabial fold or close to the pyriform aperture. Special emphasis is placed on implantation in the posterior aspect of the field. The second part deals with the narrowing of the os internum and the nasal entrance by surgery of the ala cartilage and the ala. The third part accomplishes reduction of the nasal vestibule by extending surgery to the external nasal pyramid.

In this way a much more comprehensive narrowing of the airspace is accomplished, benefiting also the superior part of the nasal cavity. Cottle has pointed out that the final success of the ozena operation depends not only on the narrowing of the cavity but also on improving the circulation and the quality of the mucosa. This is accomplished by repeated implantation of the material lateral to the inferior turbinate. My own experience is in entire agreement with his observation. If the mucosa is rather thin, I have employed only cartilage (either human or bovine) in the first operation; using cartilage, bone and plastics in the second operation. If a third operation is required plastic material (especially silicon rubber) is used almost entirely. In longterm observations the results of this procedure were superior to the other surgical attempts to improve the ozena.

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* This operation will be described in detail by Dr. Barelli.