SURGICAL CONTRIBUTION

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Endonasal microsurgery of the middle meatus

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Nowadays endonasal microsurgery is worldwide accepted and has increased our knowledge. This method offers a lot of advantages, i.e.:

1. The "inaccessible" middle meatus can be made visible.
2. It provides a better insight into the anatomic structures of the lateral nasal wall as well as its peculiar neurovascular physiopathology.
3. It improves the teaching technique in nasal surgery, which results in a better diagnostic interpretation of the pathological status by the resident.

According to these terms, a selective endonasal microsurgery technique has great advantages because of its safety, short duration and the fact that it is less traumatic for the patient.

For didactic purposes we can classify the rhinomicrosurgical procedures as follows:

1. Microsurgery of the lacrimal sac and ducts.
2. Microsurgery of the maxillary sinus.
3. Ethmoidal microsurgery.
4. Sphenoid sinus microsurgery.
5. Microsurgery of the sphenopalatine artery for the treatment of epistaxis.
6. Parasympathetic microsurgery in:
   a. Vidian neurectomy: polyposis, vasomotor rhinitis, congestive dacriocystitis.
   b. Block neurectomy: obstructive and secretory tubaritis.
7. Microsurgery for sensorial problems: cranio-facial pains.

FUNDAMENTAL CONDITIONS FOR THIS TECHNIQUE

1. Perfect knowledge of the middle meatus anatomy.
2. Training in the use of the operating microscope.
3. Adequate training in endonasal surgical procedures.
4. The appropiate surgical equipment.

The patient must be in decubitus supinus and the surgeon must be on the contralateral side of the fossa to be operated. Local or general anesthesia can be used. The microscope is provided with a 200 mm lens and set at 6x' magnification grade.

SPECIFIC SURGICAL TECHNIQUES

1. Endonasal polypectomy: it is possible to obtain an excellent view of the polyp's pedicle; electrocoagulating the polyp gives minimum bleeding and easy resection of the whole polyp. This method is useful for the resection of polyps in the most posterior region of the nasal vault in the choanal area.
2. Ethmoidectomy: it is possible to take away diseased cells without harming the healthy ones, thus, avoiding a radical ethmoidal resection.
3. Sphenoid sinus: the endonasal microsurgery allows an approach to the middle meatus without touching the nasal septum.
4. Maxillary sinus: the most common pathologies of the maxillary sinus are the infections and the reactional inflammations. The endonasal approach has both a diagnostic and a therapeutic purpose, making the classical maxillary sinus punction obsolete. Furthermore, this kind of surgery diminishes the discomfort caused by the classic Caldwell-Luc operation (paresthesias and numbness of the teeth).
5. Pterygomaxillary fossa: thanks to the microscope it has been possible to improve the surgical technique for this anatomic region, allowing a systematic surgical approach.

   In those haemorrhagic diseases, such as M. Rendu-Osler-Weber, thrombopathies etc., of which the clinical features include recurrent epistaxis, it is necessary to use a prompt, effective and easy procedure to control the bleeding. In these cases the endonasal clipping of the sphenopalatine artery is the most succesful procedure. This technique has replaced the internal maxillary artery ligature.

   Finally, the microscopical endonasal Vidian neurectomy is also a good alternative method in those cases in which it is fully indicated (recurrent nasal polyposis and severe vasomotor rhinitis).

CONCLUSIONS

The microsurgical approach to the middle meatus offers many advantages and is a relevant technique for the future. Some of these advantages are:

- Use of a natural pathway.
- Direct approach to nasal problems.
- Reduction of surgical trauma.
- No risks of complications such as neuralgias cellulitis.
- A bilateral approach to both fossae, is faster and causes a minimal trauma.
- Selective rhinomicrosurgery is possible.
- A better teaching method for residents.
- A good post-surgical course.

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