

## Recent Advances in Rhinology

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Since the beginning of the 20<sup>th</sup> century, the surgical approach to the maxillary sinus has changed considerably. Wide surgical approaches such as used in the Denker procedure have been abandoned. More selective techniques were meanwhile used such as the modified Sturmman-Canfield approach. The advances in visualization and instrumentation have allowed the preservation of more structures, for example, in latest years, more conservative transnasal endoscopic approaches such as the prelacrimal window approach and pyriform turbinoplasty have become increasingly popular in gaining access to the maxillary sinus and to the pyriform aperture. (1) For the approach to tumours that involve the pterygopalatine fossa or lateral recess of the sphenoid sinus endoscopic sinus surgery have also been evolving, promoting preservation of structures while dissecting the tumor; lessening the mobility for the patient. This improved visualization by endoscopic access enables the surgeon to locate and preserve the contents of the pterygomaxillary fossa in comparison to a traditional craniofacial procedure such as en bloc resection [1]. However, endoscopic surgery for the approach of the maxillary sinus and pterygopalatine fossa requires detailed knowledge of its anatomy to avoid unnecessary injury of its vascular and neural contents, in particular the course of the maxillary nerve, the anterior superior alveolar nerve, and its continuation into the descending palatine nerve for the respective approaches [1,2].

With advances in imaging, a preoperative assessment of the course of the anterior superior alveolar nerve on a CT scan may help to avoid injury of this nerve when performing surgery of the pyriform aperture and the anterior medial wall of the maxillary

sinus. The shoulder of the inferior turbinate is a useful landmark that can be determined at the CT scan and intraoperative and helps to localize the course of the ASAN [1].

The same principle is applied to the great palatine canal, where the establishment of references with help of more detailed imaging tools helps to prevent damage while contributing to a safer dissection of the pterygopalatine fossa [2].

An evolution toward the safety of patients in endoscopic sinus surgery is what we aim for as surgeons, and that is what we are seeing these days. And there is so much more to come!

**Bibliography**

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2. Machado A., *et al.* "Greater Palatine Canal: Computed Tomography-Based Anatomic Analysis And Clinical Significance for the Sinus and Skull Base Surgeon". *Ear, Nose and Throat Journal* (2022): 014556132211110.