Guest Editorial

During the past decade, skull base surgery has undergone a relatively fast rapid evolution toward minimally access approaches. This paradigm shift was spearheaded by a heightened awareness of the importance of improving the postoperative quality of life by decreasing the morbidity of surgery, while preserving or enhancing the oncologic, functional and reconstructive outcomes. These developments would not have been possible, if not, by the concomitant emergence of technical and technological advancements; and, most important, by the interdisciplinary collaboration between otorhinolaryngologists—head and neck surgeons and neurological surgeons. Breakthroughs in other specialties, such as radiology, radiation and medical oncology and pathology also brought significant changes and contributions.

During this period, we witnessed the inception of surgical navigation devices, endonasal Doppler and ultrasound probes, extended high-speed drills, endoscopic bipolars and microdissection instruments. Other notable developments include specialized operating suites, intraoperative high-resolution cameras and monitors and significant improvements in the optics of the rod-lens endoscopes. Despite our reliance on higher technology, the popularization of these techniques was only possible due to the standardization of anatomical modules and the dissemination of knowledge through hands-on cadaveric courses and innovations in surgical anatomy training. A thorough understanding of the anatomy is critical for any surgical technique but the effect is amplified in areas rich in critical anatomical structures, such as the skull base.

A growing literature emanating from multiple skull base centers around the world have demonstrated the feasibility of endoscopic resection of benign and malignant lesions involving the entire ventral skull base. As previously alluded, this has been made possible by the advent of better understanding of skull base anatomy from the endonasal perspective, the development of customized instrumentation as well as better hemostatic materials and more reliable reconstructive techniques. Transnasal endoscopic surgery and other minimal access techniques, such as 'keyhole' craniotomies (with or without endoscopic assistance), have become essential tools of the surgical armamentarium for the treatment of sinonasal and skull base lesions.

Conversely, traditional external approaches are indispensable to treat advanced neoplasms and those lesions that are beyond the reach of the median and paramedian endonasal corridor or other minimal access approaches. In our opinion, all these visualization tools and minimal/maximal access surgical techniques complement each other and should be part of the contemporary skull base surgeon. New technologies will enhance our surgical abilities and expand the limits of what can be achieved via endoscopic, microscopic, external and hybrid approaches; in turn, leading to further advances and novel techniques. Among others, robotic-assisted surgery for skull base surgery is within reach.

The present issue of International ORL Clinics presents advantages, limitations and outcomes of different surgical approaches to the anterior skull base as well as the use of imaging for their preoperative planning and postoperative follow-up. We recognize that these issues are undergoing continuous change and that they vary according to available resources, training and patient's needs. Expanded global experiences will better define the indications and limitations of these approaches.

'The truth is rarely pure and never simple'

—Oscar Wilde

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