Introduction

Endoscopic endonasal skull base surgery

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This issue of Neurosurgical Focus attempts to address recent advances in endoscopic endonasal skull base surgery. Although the concept of minimal invasiveness is not new to our discipline, improvements in endoscopic technology and instrumentation, as well as the gradual refinement of a variety of endonasal endoscopic approaches, have greatly facilitated our ability to safely treat a wide variety of skull base pathology that was not possible two decades ago. This speciality of neurosurgery requires precise anatomical knowledge, technical skills, and integrated appreciation of anterior and paramedian skull base pathophysiology. The evolution of this new field has been a fertile ground for innovative ideas, technological progress, and the development and refinement of novel surgical instruments. The current issue presents an extensive overview of the more recent innovations and the most debated topics in endoscopic endonasal skull base surgery. Highlights of this issue include an elaboration of the surgical nuances in the treatment of craniopharyngiomas; discussion of the application, surgical outcomes, and limitations of endoscopic endonasal surgery for olfactory groove meningiomas; detailed anatomical descriptions of approaches for and results of resection of more advanced pathological entities such as chondrosarcomas, cholesterol granulomas, and trigeminal schwannomas; and strategies for the management and prevention of complications, including the formidable nemesis of endonasal surgery, the CSF leak.

Endonasal endoscopic surgery is one aspect of a general movement in many surgical disciplines towards less invasive procedures. In the current environment of evidence-based medicine, quality control, and cost containment, surgeons are under increasing pressure to justify their costly interventions and reduce the expenses associated with their interventions. It is insufficient to assess the success of surgery based solely on the degree of tumor resection or mortality rates; instead, outcome measures such as quality of life and patient satisfaction are increasingly coming into play, particularly when comparing surgical interventions with medical therapy or radiosurgery alternatives.

Minimal access surgery, whether performed through natural orifices or small incisions, requires surgeons to “think outside the box” of their traditional training. Anatomical knowledge and computer-guided navigation become increasingly important as surgical adjuncts. Nevertheless, the field of neurosurgery does not always move at a rapid pace since the cost of mistakes is so high. Debates continue regarding certain complex pathological entities and the best method for achieving watertight closure of the skull base, which many surgeons still feel are best addressed through a craniotomy. This issue of Neurosurgical Focus embraces those controversies and hopefully advances the conversation with new evidence and ideas that will help the field and ultimately our patients.

Finally, we would like to express our sincere gratitude to all authors who donated their excellent ideas and manuscripts to this issue, which will stand as a seminal contribution to the field.

Disclosure

Dr. Schwartz reports a consultant relationship with Karl Storz and stock ownership in Visionsense.