

Preface

Malignant Tumors of the Skull Base



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Skull base surgery for the treatment of malignant tumors has undergone substantial evolution over the past 50 years. Although resection of skull base tumors was sporadically attempted in the early part of the 20th century, it was not until the 1960s that interdisciplinary approaches combining expertise from neurosurgery, otolaryngology, and maxillofacial surgery facilitated the development of the field of skull base surgery. During the 1980s and 1990s, significant advancements in surgical and reconstructive techniques made oncologic resections at the skull base possible with acceptable morbidity. Concurrent advancements in medical imaging further improved visualization of skull base anatomy and surgical planning, driving an era of aggressive maximal resections. The last decade has seen the rise of endoscopic technologies and new techniques to approach the skull base. These approaches require validation as appropriate options in the management of sinonasal and skull base malignancy. Endoscopic resections need to adhere to the tenets of oncologic surgery, complete surgical resection with microscopically clear margins, to provide the survival advantages gained with craniofacial resection.

Concomitant with the developments in surgery have been improvements in radiation targeting.

The routine use of 3D treatment planning and intensity-modulated radiation therapy has allowed delivery of higher radiation doses to the tumor while minimizing morbidity due to irradiation of normal structures. Similarly, a better understanding of tumor biology has allowed the construction of more complex treatment strategies, which incorporate neoadjuvant, concomitant, or adjuvant chemotherapies. These new strategies have had a significant positive impact on patient survival in select pathologies. The era of personalized targeted therapy is upon us and rapid strides are being made in the identification of specific tumoral targets for novel biologic agents. This is sure to impact our current management paradigms.

In this issue we have compiled articles addressing the diagnosis and management of the most common skull base malignancies. We review the pathology, surgical approaches, and outcomes for each tumor type. In addition, we have included overviews on open and endoscopic approaches to the skull base, as well as techniques for reconstruction. In the modern era, extensive resection of skull base malignancies through a combination of open and minimally invasive approaches can be achieved with acceptable morbidity when appropriate planning and reconstructive techniques are

used. These surgical procedures, when fully incorporated into an individualized multimodal treatment plan, allow for the maximization of patient survival and quality of life.

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