

Surgical Management of Cavernous Sinus Meningiomas

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Cavernous sinus meningiomas are complex tumors that offer a perpetual challenge to skull base surgeons. The senior author has employed a management strategy for these lesions aimed at maximizing tumor control while minimizing neurologic morbidity. This approach emphasizes combining “safe” tumor resection and direct decompression of the roof and lateral wall of the cavernous sinus as well as the optic nerve. Fifty (50) patients who underwent subtotal resection via frontotemporal craniotomy concurrently with decompression of the cavernous sinus and ipsilateral optic nerve were analyzed. The results of the cranial nerve outcomes are discussed in relationship to primary radiation therapy. This treatment of cavernous sinus meningiomas using surgical decompression with or without adjuvant radiation is an effective oncologic strategy, achieving excellent tumor control rates with low risk of neurologic morbidity, with cranial nerve outcomes superior to SRS or SRT. For tumors that fail treatment, the results of Cavernous Sinus resection, with or without carotid artery bypass will be discussed as a treatment option.