SUBCORTICAL SURGERY GROUP

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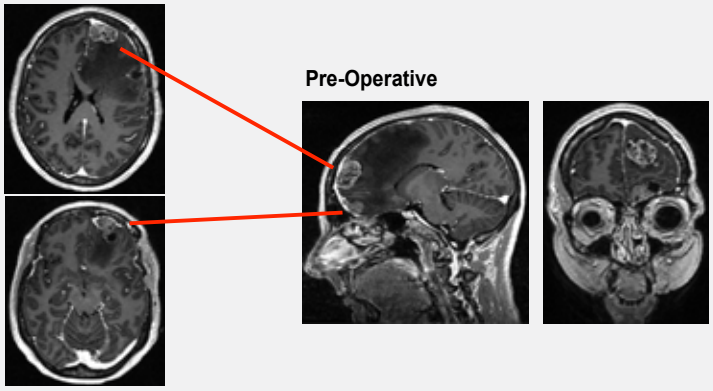
SSG CASE REVIEW: Transsulcal Surgical Approach, Frontal Metastases

Clinical Presentation

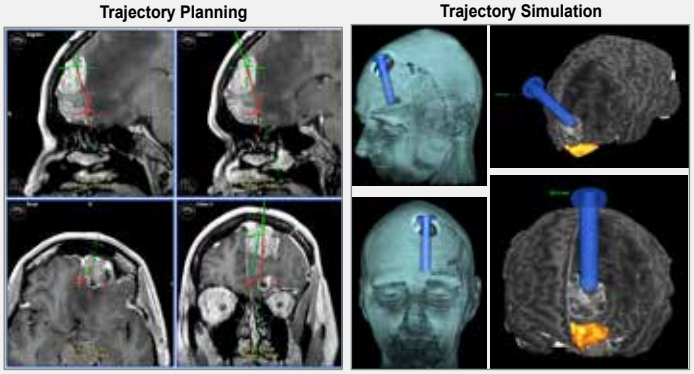
The patient is a 51-year-old woman with a history of metastatic cervical cancer, status post radical hysterectomy in 2006 and systemic chemo/radiation therapy. In 2014, she suffered progressive aphasia and confusion over a one-week period. MRI of the brain revealed two left frontal contrast-enhancing lesions with extensive peri-tumoral edema. The superficial lesion measured 2.6 x 2.7 x 3.2cm and was located in the anterior aspect of the superior frontal gyrus. The deep lesion measured 2.4 x 2.5 x 1.4cm and was located in the inferior frontal gyrus adjacent to the anterior skull base.
On examination, the patient had exhibited significant delay when answering questions and spoke with significant hesitancy and frequent paraphasic errors. Dexamethasone was administered without symptomatic improvement.

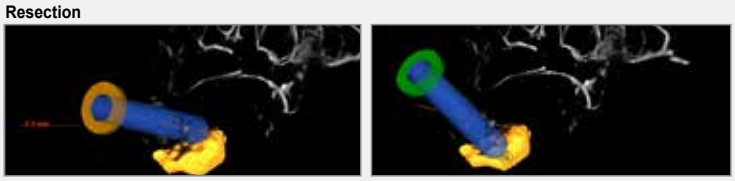


Surgical Management

A surgical trajectory was planned to allow resection of the superficial lesion, with plans for a transsulcal surgical approach to the deeper lesion through the superficial resection cavity.

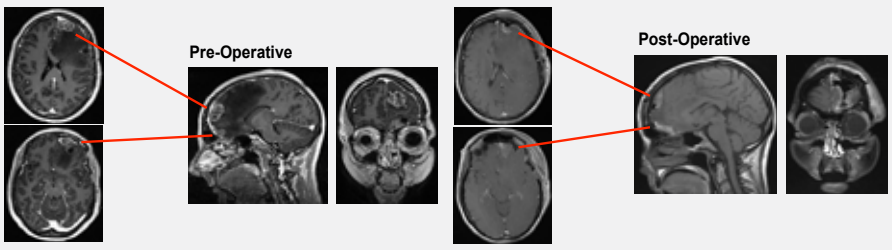
Both lesions were removed through a small incision/craniotomy. Post-operative MRI demonstrated gross total resection of both lesions.





Clinical Course and Outcomes

The patient was discharged home on post-operative day 1. By the time of follow-up (post-operative day 14), the patient was weaned off Decadron therapy and had regained full speech, as well as cognitive capacities.



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Comments

The patient's neurologic decline significantly compromised her quality of life. The surgical resection was performed with the goal of restoring the patient's cognitive and speech function. Because patients afflicted with cerebral metastasis frequently require chemotherapy and radiation therapy post-craniotomy for treatment of systemic disease, minimizing the delay to these treatments is a major consideration. While the lesions in this patient could be safely removed through a bi-frontal incision with an extended frontal craniotomy, we chose a parafascicular approach, a less invasive method with automated resection, as described here, to minimize the risk of morbidity, as well as recovery period needed prior to initiation of subsequent systemic therapies.