

## Endoport assisted resection of intraventricular tumors

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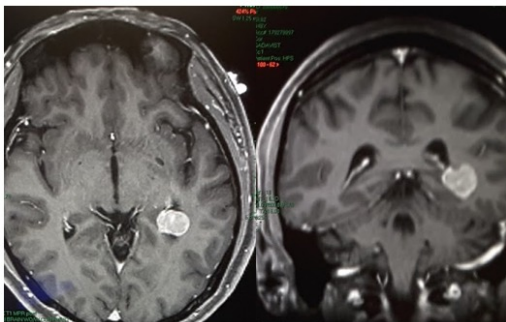
### Introduction

Deep seated brain lesions are difficult to resect without significant damage to normal brain. Periventricular and ventricular lesions require extensive dissection, placing significant brain tissue at risk. Resection of Intraventricular lesions are challenging due to their location deep to normal white matter tracts. Morbidity associated with these techniques can be as high as 70%, with about half of the patients having more than 1 complication. We describe a case of exoscope and tubular retractor system assisted resection of intraventricular meningioma.

### Methods

One patient with symptomatic intraventricular meningioma underwent resection using the Brain Path endoport system and an exoscope. Pre-op, patient underwent MRI with DTI images and procedure was performed using frameless stereotactic navigation. The trajectory from target sulcus to the lesion was selected and a small craniotomy was performed.

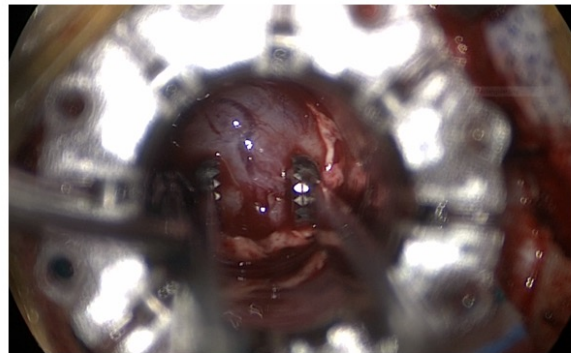
#### Intraventricular meningioma located in the left atrium



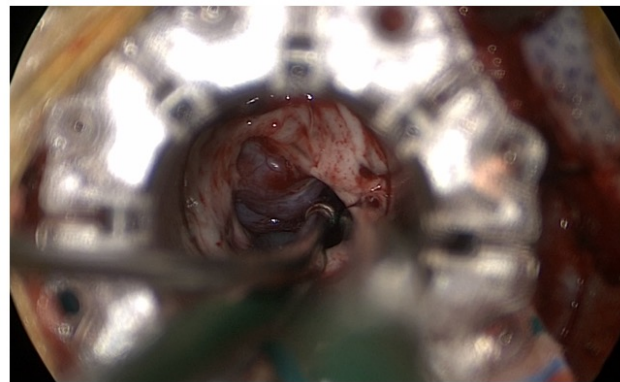
### Results

Using stereotactic navigation, a trans-sulcal route was planned with minimal white matter transgression to reach the intraventricular tumor. Complete resection was achieved in this patient. There were no postoperative complications and the patient was discharged from the hospital on postoperative day 1.

#### Removal of intraventricular meningioma via the endoport under exoscope visualization



#### Intraventricular Meningioma visualized through the exoscope



### Conclusions

Endoport assisted surgery may be considered in resection of intraventricular meningioma with good outcome and minimal brain transgression. The selected craniotomy, small durotomy, minimal brain transgression, and decreased brain retraction provides a safer option and can improve patient outcomes.

### Learning Objectives

To evaluate the potential benefit of minimally invasive approach to resecting intraventricular lesions.

### References

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