

## Video Abstract

# Infundibular hemangioblastoma resection: Video case report

Steven B. Housley<sup>1</sup>, Matthew J. Recker<sup>1</sup>, Timothy E. O'Connor<sup>1</sup>, Adnan H. Siddiqui<sup>2</sup>

<sup>1</sup>Department of Neurosurgery, <sup>2</sup>Departments of Neurosurgery and Radiology, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, Buffalo, New York, United States.

E-mail: Steven B. Housley - shousley@ubns.com; Matthew J. Recker - mrecker@ubns.com; Timothy E. O'Connor - toconnor@ubns.com; \*Adnan H. Siddiqui - asiddiqui@ubns.com



### \*Corresponding author:

Adnan H. Siddiqui,  
Departments of Neurosurgery  
and Radiology, Jacobs School  
of Medicine and Biomedical  
Sciences, University at Buffalo,  
Buffalo, New York, United  
States.

asiddiqui@ubns.com

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## ABSTRACT

**Background:** Hemangioblastomas are benign (World Health Organization Grade I), highly vascular neoplasms commonly associated with Von Hippel-Lindau (VHL) disease.<sup>[2]</sup> The VHL tumor-suppressor gene, located on chromosome 3, is implicated in sporadic cases and cases associated with VHL disease. Hemangioblastomas most commonly arise in the posterior fossa; however, they may also be found supratentorially or within the spinal cord.<sup>[3]</sup> Surgical intervention is indicated for symptomatic lesions with a goal of complete resection of the enhancing nodule.<sup>[1]</sup>

**Case Description:** We demonstrate the case of a 69-year-old man with a history of multiple hemangioblastomas who had undergone two previous craniotomies and Gamma-Knife radiosurgery (Video [https://drive.google.com/file/d/1Uwsb80NLmIW2Enp-DVdtM9\\_Oqbid3Ih/view?usp=sharing](https://drive.google.com/file/d/1Uwsb80NLmIW2Enp-DVdtM9_Oqbid3Ih/view?usp=sharing)). He presented with progressive imbalance and diplopia and was found to have a new lesion within the suprasellar cistern. Digital subtraction angiography (DSA) and magnetic resonance imaging (MRI) characteristics were typical of hemangioblastoma. Surgery was determined to be indicated, with a goal of vision preservation. Preoperative embolization was not possible because preoperative DSA demonstrated vascular supply by only small perforators directly from the internal carotid artery. Hypopituitarism was identified preoperatively, although diabetes insipidus was not present. The patient underwent a right orbitozygomatic craniotomy and extradural anterior clinoidectomy for access. The tumor was noted to encapsulate the infundibulum, which necessitated its sacrifice. Postoperatively, the patient remained at his neurologic baseline. He had a positive triphasic diabetes insipidus response and was discharged home on maintenance desmopressin. Postoperative MRI demonstrated complete lesion resection.

The patient gave informed consent for treatment and video recording. Institutional review board approval was deemed unnecessary.

**Conclusion:** This video highlights a safe and effective surgical technique for suprasellar lesions as well as the complex anatomy observed through an orbitozygomatic approach.

**Keywords:** Craniotomy, Hemangioblastoma, Infundibulum

## [Video 1]-Available on:

[www.surgicalneurologyint.com](http://www.surgicalneurologyint.com)

## Annotations<sup>[1-3]</sup>

- 1) 2:07 – Anterior clinoidectomy.
- 2) 3:54 – Sylvian fissure dissection.

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- 3) 5:22 – Beginning of tumor dissection.
- 4) 6:48 – Infundibular transection.
- 5) 7:50 – Tumor removal.

#### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

#### Conflicts of interest

Financial Disclosure: Housley, Recker: None Siddiqui: Financial interest/investor/stock options/ownership: Adona Medical, Inc, Amnis Therapeutics, (Purchased by Boston Scientific October 2017), Blink TBI Inc., Buffalo Technology Partners Inc., Cerebrotech Medical Systems, Inc., Cognition Medical, Endostream Medical Ltd., Imperative Care, International Medical Distribution Partners, Neurovascular Diagnostics Inc., Qu2019Apel Medical Inc, Rebound Therapeutics Corp. (Purchased 2019 by Integra Lifesciences, Corp), Rist Neurovascular Inc., Sense Diagnostics, Inc., Serenity Medical Inc., Silk Road Medical, Spinnaker Medical, Inc., StimMed, Synchron, Three Rivers Medical Inc., Vastrax, LLC, VICIS, Inc., Viseon Inc; Consultant/advisory board: Amnis Therapeutics, Boston Scientific, Canon Medical Systems USA Inc., Cerebrotech Medical Systems Inc., Cerenovus, Corindus Inc., Endostream

Medical Ltd., Imperative Care, Inc. Integra LifeSciences Corp., Medtronic, MicroVention, Minnetronix Neuro, Inc., Northwest University–DSMB Chair for HEAT Trial, Penumbra, Qu’Apel Medical Inc., Rapid Medical, Rebound Therapeutics Corp.(Purchased by Integra LifeSciences Corp.), Serenity Medical Inc., Silk Road Medical, StimMed, Stryker, Three Rivers Medical, Inc., VasSol, W.L. Gore and Associates; Principal investigator/steering committee of the following trials: Cerenovus NAPA and ARISE II; Medtronic SWIFT PRIME and SWIFT DIRECT; MicroVention FRED and CONFIDENCE; MUSC POSITIVE; and Penumbra 3D Separator, COMPASS, INVEST, and TIGER.

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