

Video Abstract

# Unedited microneurosurgery of a fourth ventricular ependymoma

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## Abstract


**Background:** In this video abstract, we present an unedited microsurgical resection of a fourth ventricular ependymoma performed by a senior author (JH). Currently, the goal of a standard treatment of a fourth ventricular ependymoma is based on microsurgical resection followed by radiochemotherapy. Our aim is to demonstrate the efficiency and safety of our microsurgical technique in deep brain territories under the principle “simple, clean, and preserving the normal anatomy.” For this, a midline suboccipital approach and a proper praying sitting position are essential.

**Case Description:** The patient is placed in a sitting praying position. After a midline suboccipital craniotomy, the ependymoma is accessed through telovelar approach. Partial debulking of the tumor follows careful separation of cerebellar tonsils; later, cautious dissection along the borderline of the tumor is performed. The cranial border of the lesion is accessed and the superior limit of the fourth ventricle and aqueduct is reached. Vascular feeders of the tumor coming from both posterior inferior cerebellar arteries are coagulated and cut. After careful dissection and devascularization of the lesion, the ependymoma is pulled out using soft and continuous traction with long ring microforceps. The final steps include inspection of remnants into the fourth ventricle with an appropriate orientation of the microscope toward the aqueduct and both foramina of Luschka.

**Conclusion:** We believe this unedited video will provide us all small and big details that a neurosurgeon like a senior author JH takes into consideration when performing an efficient and safe surgery into the fourth ventricle, under the principle “simple, clean, and preserving the normal anatomy surgery.”

**Videolink:** [http://surgicalneurologyint.com/videogallery/4<sup>th</sup>-ventricle-ependymoma/](http://surgicalneurologyint.com/videogallery/4th-ventricle-ependymoma/)

**Key Words:** Ependymoma, fourth ventricle, midline suboccipital approach, sitting position, unedited microsurgical video

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