

Video Abstract

One burr-hole craniotomy: Supracerebellar infratentorial paramedian approach in Helsinki Neurosurgery

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Abstract

Background: In this video abstract, we present a one burr-hole craniotomy for the standard supracerebellar infratentorial (SCIT) paramedian approach developed in Helsinki Neurosurgery for the microsurgical management of pineal region lesions, tentorial meningiomas, as well as arteriovenous malformations, aneurysms, and intrinsic tumors of the superior surface of the cerebellum. In this regard, the use of praying sitting position in Helsinki Neurosurgery, which is a more ergonomic variant of the classic sitting position, offers several advantages such as lower intracranial pressure, good venous outflow, gravitational retraction, and straight anatomical orientation.

Case Description: The patient is placed in sitting praying position. A straight single-layer incision is made 2–3 cm lateral from the midline, starting about 1 inch cranial from theinion and extending caudally toward the foramen magnum. Curved retractors provide a wide clean space for craniotomy. A burr-hole is made above the transverse sinus, which may be identified by its anatomic relation with superior muscle insertion line on the occipital bone. After detachment of the dura with blunt dissectors, a craniotomy around the transverse sinus and continuing to the confluens sinuum is performed to expose about 3 cm of the dura below the level of the transverse sinus. In case of an adherent dura particularly present in elderly patients, a long blunt flexible dissector (Yasargil dissector) is used for the detachment of the bone from the dura. A few drill holes are made for tack-up sutures. Finally, a hemostatic agent covers the transverse sinus and a sinus-based dura opening is performed under the microscope.

Conclusion: One burr-hole craniotomy for an SCIT paramedian approach may represent the more efficient procedure for approaching the pineal region, inferior surface of the tentorium, and the superior surface of the cerebellum as well.

Videolink: <http://surgicalneurologyint.com/videogallery/paramedian-suboccipital-approach>

Key Words: Burr-hole, craniotomy, supracerebellar infratentorial approach

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