

Video Abstract

One burr-hole craniotomy: Posterior interhemispheric approach in Helsinki Neurosurgery

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Abstract

Background: In this video abstract, we present a one burr-hole craniotomy for the posterior interhemispheric approach developed in Helsinki Neurosurgery to access posteriorly the medial surface of cerebral hemispheres, falx cerebri, and deep midline cerebrovascular structures. Therefore, preoperative imaging is essential to achieve an optimal operative corridor for a safest and more efficient approach.

Case Description: The patient with a papillary tumor of the pineal region is placed in sitting position. A midline single-layer skin incision is made in front of the superior sagittal sinus. Strong retraction maintains a clean space for craniotomy. Aiming to reduce the risk of sinus transgression or cortical veins damaging in the eloquent frontal–parietal area, a burr-hole is made over the superior sagittal sinus at the anterior border of the bone flap and the bone is detached from the dura posteriorly with blunt dissectors. Thus, proximal detachment of the dura under some visual control remains safe. A long blunt flexible dissector is used during this stage in case of elderly patients with an adherent dura. Craniotomy around the superior sagittal sinus is performed to expose 2–3 cm of the dura lateral to the sagittal sinus according to the exact location of the lesion. Moreover, craniotomy extends slightly over the contralateral side to allow some retraction of the sagittal sinus. Two cuts, from both sites of the burr-hole, are joined along the posterior midline. A few drill holes are made for tack-up sutures. Finally, a hemostatic agent covers the sagittal sinus and a sinus-based dura opening is performed under the microscope.

Conclusion: The described one burr-hole craniotomy may represent a more efficient manner for performing a posterior interhemispheric approach.

Videolink: <http://surgicalneurologyint.com/video/gallery/posterior-interhemispheric-approach>

Key Words: Burr-hole, craniotomy, posterior interhemispheric approach

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