

Video Abstract

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

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Abstract

Background: In this video-abstract, we present a one burr-hole craniotomy for the anterior interhemispheric approach developed in Helsinki Neurosurgery to access the medial surface of cerebral hemispheres, the falx cerebri, the distal segment of the anterior cerebral artery, the corpus callosum, the third ventricle, and the lateral ventricles. Therefore, preoperative imaging is essential to achieve an optimal operative corridor for safest and more efficient approach.

Case Description: The patient with a no ruptured right pericallosal aneurysm is placed in semi-sitting position. A midline single-layer curved skin incision is made behind the hairline with more extension to the side of the planned bone flap. Strong retraction with hooks keeps a clean space for craniotomy. Hemostatic Raney clips are placed at the posterior border of the wound. A burr-hole is made over the superior sagittal sinus at the posterior border of the bone flap. The bone is detached from the dura anteriorly with blunt dissectors. Thus, we avoid harming the superior cerebral veins distributed at the posterior frontal area. After the detachment of the dura, a craniotomy around the superior sagittal sinus is performed to expose 2–3 cm of the dura lateral to the sagittal sinus. Moreover, the 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 anterior midline by thinning the bone with craniotome blade without the footplate. A few drill holes are made for tack-up sutures. The bone is cracked along the thinned midline. 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 an anterior interhemispheric approach.

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

Key Words: Anterior interhemispheric approach, burr-hole, craniotomy

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