Interhemispheric approach

Variants

Anterior interhemispheric approach

Posterior interhemispheric approach

Transcallosal interhemispheric approach.

Unilateral interhemispheric approach.

Interhemispheric Transcallosal Transchoroidal Approach.

Craniotomy

Because the interhemispheric approach provides equal access to both lateral ventricles, the side of the craniotomy is primarily dependent on the presence of midline draining cortical veins.

Dural opening

The dura is opened in a U-shaped fashion and flapped toward the sagittal sinus. This allows for careful inspection for arachnoid granulations and cortical veins draining into the sinus as midline is approached. At this stage the venous anatomy along the midline can be carefully assessed. Arachnoid bands tethering these veins are sharply dissected. There are usually multiple corridors between for interhemispheric dissection. If at all possible, no draining veins are sacrificed. A self retaining retractor is placed along the medial edge of the exposed hemisphere. The cortex is buffered by a Telfa patty prior to retractor placement. A retractor along the falx to widen the operative field is not indicated to avoid cerebral venous sinus thrombosis.

Diffuse intravenous thrombosis induced by cortical vein injury and prolonged brain retraction may be important causes of unexpected delayed postoperative intracerebral hematoma in surgery using the interhemispheric or subtemporal approach [1)].

Interhemispheric dissection

The next step in the approach is the interhemispheric dissection. Identification of the paired pericallosal arteries and the glistening white surface of the corpus callosum complete the initial interhemispheric approach.

Next, an incision is made through the corpus callosum to access the lateral ventricle.

The classic incision is 2 cm long, 2.5 cm behind the genu of the corpus callosum, reliably placing the foramen of Monro in the operative field. The incision is made between the pericallosal arteries

Indications

Interhemispheric transcallosal approach.

Interhemispheric Approach to Anterior Communicating Artery Aneurysm.

1)
Sakaki T, Matsuyama T, Nagata K, Nakase H, Hirabayashi H, Morimoto T. Delayed intracerebral haemorrhage after intracranial surgery. J Clin Neurosci. 1999 Jan;6(1):54-7. PubMed PMID: 18639126.