Fourth ventricle approaches

General information

● position, skin incision, craniectomy: as in Midline suboccipital craniectomy using the Concorde position

● the posterior arch of C1 does not need to be removed unless the tonsils extend inferior to the foramen magnum

● options:

○ neuromonitoring: SSEP/MEP, BAER

○ temporary pacemaker in case of bradycardia due to brainstem manipulation

○ image guided navigation: if used, fiducials placed before pre-op imaging and kept in place until surgery usually helps with registration

● complications: ○ hydrocephalus: incidence as high as 30%; average is probably lower

○ cerebellar mutism: develops in up to 30%

○ other complications: dysarthria: 30%, dyphagia:33%

The two most common surgical routes to the fourth ventricle are:

Transvermian approach and Telovelar approaches.

see Tonsillouvular fissure approach.