The frontal interhemispheric approach is a surgical technique used to access and remove tumors located near the midline of the brain, particularly in the frontal lobe. This approach involves accessing the brain through the space between the two cerebral hemispheres, which are the two halves of the brain.

Here's an overview of the steps involved in the frontal interhemispheric approach:

Patient Positioning: The patient is positioned on the operating table in a way that provides optimal access to the frontal area of the brain. This positioning may vary depending on the specific requirements of the surgery and the patient's anatomy.

Incision: A scalp incision is made along the midline of the forehead, starting at the hairline and extending backward. This incision provides access to the skull and allows the surgeon to create a bone flap.

Bone Flap Creation: Using a surgical drill or saw, the neurosurgeon creates a bone flap in the skull. The size and shape of the bone flap may vary depending on the location and size of the tumor.

Dural Opening: After the bone flap is removed, the next step is to open the dura mater, which is the tough membrane that covers the brain. The dural opening is typically made in a way that provides access to the frontal interhemispheric space.

Brain Exposure: With the dura opened, the neurosurgeon carefully retracts the brain tissue to access the frontal interhemispheric space. Specialized instruments and techniques may be used to gently move the brain structures aside while minimizing damage to surrounding tissue.

Tumor Resection: Once the tumor is exposed, the neurosurgeon begins the process of tumor resection. This involves carefully removing the tumor while preserving nearby critical structures and minimizing damage to healthy brain tissue.

Closure: After the tumor has been removed, the dura mater is closed using sutures or other closure techniques. The bone flap is then replaced and secured with plates, screws, or other fixation devices. The scalp incision is closed with sutures or staples.

The frontal interhemispheric approach provides good access to tumors located near the midline of the brain, such as certain types of meningiomas or gliomas. However, like any surgical approach, it carries risks, including the potential for damage to surrounding brain tissue, bleeding, infection, and other complications. The decision to use this approach will depend on factors such as the size, location, and characteristics of the tumor, as well as the patient's overall health and individual circumstances.

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Last update: 2024/06/07 02:58

