Craniotomy for Meningioma (Brain Tumor)

Overview
This procedure, performed under general anesthesia, creates an opening through the skull for removal of a meningioma. This type of tumor is found in the dura - the fibrous membrane between the brain and skull. The surgery usually requires several hours to complete, depending on the location and size of the meningioma.

Preparation
In preparation for the procedure, the patient is anesthetized and all or a portion of the scalp may be shaved. The patient's head is secured to prevent movement.

Accessing the Brain
The surgeon then creates a long, arched incision in the scalp overlying the tumor. The soft tissue is folded back to expose the skull. The surgeon drills one or more small holes into the skull and then saws between the holes to free a section of bone. This "craniotomy" bone flap is removed and stored. The surgeon now has direct access to the brain, which is covered by the dura.

Removing the Tumor
In most cases, the meningioma is attached to the dura. Soft, flexible retractors may be used to hold healthy brain tissue aside to give the surgeon room to work. The surgeon then removes as much of the meningioma as can safely be removed. In some cases, this will be the entire tumor, but it may be necessary to leave a small amount of tumor and treat this portion with other methods such as focused radiation. The surrounding dura is usually removed and the area is patched with graft material.
End of Procedure
Once the meningioma has been removed, the skull flap will be put back into place and anchored with plates and screws. In some cases, a temporary drain may be placed at the surgical site to prevent fluid buildup. The skin flap is folded back and sealed with sutures or surgical staples.

Aftercare
The patient can expect to stay in the hospital for 2 to 4 days after surgery. The patient is usually observed in the intensive care unit on the first night after the surgery. The patient usually will be able to get out of bed the day after surgery. During recovery, the patient's mental and physical status are tested, and therapy may be administered. Full recovery usually takes several weeks and the patient may feel fatigued during this time.