Craniofacial Resection

The craniofacial area refers to the bones of the skull and the face. Craniofacial resection is the surgical removal of tumors in these regions. This procedure involves making incisions in the scalp, the interior of the nose, and sometimes on the face to access the tumor. Your surgeon approaches the tumor strategically to reduce the risk of damage to the brain, nerves, or other major structures.

Before Surgery

You will receive specific instructions from your physician for how to appropriately prepare for the procedure, such as when to arrive and food/drink restrictions. A few days before your operation, the anesthesiologist will ask you a few questions so that they can create a comprehensive anesthesia plan based on your medical history. On the day of your surgery, you will arrive at the hospital a few hours before your scheduled procedure. The nurses, anesthesiologist, and neurosurgery and head and neck surgery teams will check in with you. If you have any last minute questions, this is a good time to ask them.

The Surgery

General anesthesia will be used to put you to sleep during the surgery. Multiple approaches exist for craniofacial resection depending on the location, size, and extent of the tumor.

**Lateral Rhinotomy approach**: Accesses tumors in the anterior skull base and sinuses in the upper part of the nose.
**Weber Ferguson approach:** Accesses tumors involving the upper jaw (maxilla) and eye socket (orbit).

This operation requires a neurosurgeon to work alongside a head and neck surgeon to completely remove the tumor. Certain resection and reconstruction approaches may require a tracheostomy and/or feeding tube to help you breathe and eat. The resected tumor will be sent to the frozen section lab to be analyzed by a pathologist. The frozen section analysis allows for immediate assessment of the tumor during surgery. Once the pathologist determines that the operable tumor has been removed sufficiently, the reconstruction process will begin. The skull base needs to be reconstructed in several layers in order to prevent the bacteria in the nasal cavity from entering the brain.

There are specific risks associated with craniofacial surgery:

- Infection.
- Bleeding, including hematoma.
- Increased air around the brain (Pneumocephalus).
- Cerebrospinal fluid leak.
- Imbalance of water and sodium metabolism (Diabetes insipidus).
- Loss of smell.
- Facial nerve injury.
- Chronic tearing problems.
- Vision changes.
- Facial numbness.
- Mucus retention.

**After Surgery**

Depending on the extent of surgery, a hospital admission may be required after surgery, including monitoring in the intensive care unit (ICU) for some patients. The duration of time spent in the hospital post-surgery is case-dependent. A discharge planning team will work with you and your family to determine the best route forward.

Please note that this information is intended for educational purposes. It does not replace consultation with your doctor, and it should not be interpreted as medical advice. We encourage you to speak to your health care provider if you have further questions or concerns regarding your medical care.

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