

Awake Craniotomy

Patient Information



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What is an awake craniotomy?

An awake craniotomy, also called awake brain surgery, is a comfortable and pain-free procedure performed on the brain while the patient is awake. During the operation, patient is freely talking to anaesthesia and surgery teams, allowing them to monitor relevant brain functions while operating. The patient may also choose to see some part of his or her operation on a monitor during the procedure.

Why is awake craniotomy done?

An awake craniotomy is a highly specialised technique, and is usually done for very specific brain tumors including tumors which lie near the brain areas that control vital functions like memory, speech, motor and sensory skills. Keeping the patient awake allows the surgeon to perform maximum safe resection while continuously monitoring these functions. It is known that an awake surgery makes the procedure safer ensuring improved chances of tumor resection thus decreasing the chances of recurrence, and improving overall outcome.

What type of anaesthesia is used in awake craniotomy?

The technique we offer at the Aga Khan University Hospital Karachi is “Awake throughout Approach”. The patient’s intraoperative care will be led and monitored by a qualified and trained anesthetist with special expertise in this procedure. The patient remains conscious, awake, comfortable and free from pain throughout the operation.

Are there any risks associated with this anaesthesia?

Other than the potential risk involved with brain surgery that your surgeon has explained, overall it is a safe procedure; however following are risks associated with awake throughout approach:

- You may experience some discomfort related to positioning or during resection of tumor. You have to share this with your anesthetist, and can easily be managed with additional painkillers.
- Some patients may feel nausea or vomiting (4-5%), which can easily be managed with antiemetic drugs.
- There is also a risk of having intraoperative fits (4-6%), which is managed with anti-seizure medications.
- The local anesthesia toxicity that may present in the form of fits, drop in blood pressure or heart rate, is also one of the rare complications associated with the technique.

In rare cases, patients may need to be put under general anesthesia for part of the procedure.

How do I get ready for the awake throughout approach?

The procedure requires no special preparation. However, you have to be motivated and confident about need of being awake and willing to participate actively in a care plan along with other team

members. Please visit your anesthetist for a detailed discussion where you can ask all your questions.

What will happen during the anaesthesia?

The anaesthetist will inject local anaesthesia to the nerves that supply sensation to the skull (scalp block). This will make your skull numb so you do not feel any pain during the procedure. The next step is to position you comfortably on the operating table, where your head will be fixed. During the surgery anesthetist will monitor neurological functions by asking you to perform various tasks like movement of limbs and answering various questions.

How long will the procedure take?

The procedure of scalp block usually takes 20-25 minutes. The effect of this would last throughout the duration of surgery, which is around 4-5 hours.

How long will it take for me to recover from anaesthesia?

It will take approximately 1-2 hours to fully recover from anesthetic effect after surgery.

Post-Surgery

After surgery, you will have to be shifted to the recovery room where you will remain for 3-12 hours. You may be admitted to the Special Care Unit or the Intensive Care Unit for further monitoring.

The nurse will frequently check your heart rate and rhythm, blood pressure, temperature and oxygenation. If admitted, you will stay in the Special Care Unit or the Intensive Care Unit for a day depending upon the complexity of your surgery after which you will be shifted to the ward.

When can I go home?

The usual stay is 4-6 days but the length of stay may be different depending on post-surgery recovery.

What precautions will I have to take after the surgery?

You will be required to follow nursing instructions and let the nurse know in case of following symptoms:

- Nausea
- Vomiting
- Pain

What will be the instruction for me on discharge?

You will be asked to come for a follow up visit after one week of discharge. Your stiches will be

removed after 7-10 days. The operated area should be kept dry and clean while the stiches are still in place. You will be able to shower and wash your hair with shampoo but immediately dry the operated area after bathing.

Do not apply any ointment or powder on the operated area.
Call (0301-8276080) if you face any of the following:

- Redness at surgical site
- Swelling
- Discharge at surgical site
- Nausea
- Seizures
- Fever