



## Neurosurgical Treatment of Brain Abscess

Treatment of brain abscess is targeted at removing the bulk of infected tissue, obtaining a diagnosis of the responsible bacteria and killing the causative bacteria with intravenous antibiotics that penetrate the brain.

A period of intravenous followed by oral antibiotics is usually required and this will be co-ordinated with the infectious diseases team at the hospital. You may be able to receive the antibiotics at home through Hospital in the Home services. Regular blood tests will be required throughout this time to monitor the state of the infection and confirm that treatment is optimal.

### OPERATION

Two types of surgery may be performed to treat the brain abscess.

#### **Burrhole aspiration of brain abscess**

An aspiration of the liquid pus may be performed through a small incision directly over the brain abscess. This will collapse down the abscess, relieve pressure on the surrounding brain and give the antibiotics the greatest chance of being effective.

#### **Craniotomy and excision of brain abscess**

This involves lifting up of a piece of bone and removing the entire abscess wall and contents under direct vision may be performed.

Whichever operation is chosen, you will still require long-term antibiotics and there is a chance of the brain abscess reforming whilst the antibiotics are working resulting in the need for a second operation.

It is essential the underlying cause of the brain abscess is also treated. This may mean surgery on the adjacent air cells and sinuses of the skull to prevent direct spread or simply the adequate treatment of any simultaneous infections in the body. Strict control of diabetes and other possible immunosuppressive conditions is also indicated.

#### *Risks of this procedure:*

The risks of this operation includes the following. A detailed discussion with your surgeon is recommended prior to surgery.

- Recurrent accumulation of abscess.
- Infection – superficial wound infection or deeper infections including meningitis, osteomyelitis.
- Bleeding – which may be superficial or deep causing intracerebral haematoma and stroke-like symptoms.
- Seizures.
- Permanent neurological damage in the form of weakness, numbness, paralysis.
- Coma.
- Death (rarely).

### LONG-TERM EFFECTS

Many people will recover completely following a brain abscess. Occasionally the infection may cause scarring in the adjacent brain tissue leading to long-term seizures which will need treatment with medications. Stroke-like symptoms like weakness, numbness and speech disturbances that were present may not completely resolve and the patient may be left with residual weakness or speech disturbances.