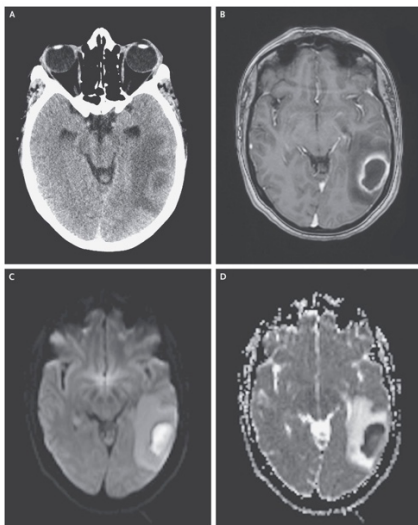




## Brain Abscess

A brain abscess is a localised infection within the brain substance containing bacteria or other microbes. The body forms a protective barrier around the infection however the abscess can still expand and cause a reactive swelling in the surrounding brain.



### CAUSES

A brain abscess may develop from one of three routes:

- Direct spread from adjacent infected regions i.e. infection in the ear, the eye, or the sinuses.
- Spread from distant infected regions through the bloodstream e.g. urinary tract, lung, and bone infections.
- Direct implantation of bacteria into the brain substance e.g. post-trauma, skull fractures, surgery.

### SIGNS & SYMPTOMS

People with brain abscesses are generally very sick. They may show:

- Systemic symptoms.
- Symptoms related to raised intracranial pressure and
- Symptoms related to localised pressure.

### Systemic symptoms

There will be normal signs of infection with swinging fevers, hot/cold flushes and drenching sweats.

### Raised intracranial pressure

Headaches, nausea and vomiting may occur from raised pressure inside the skull from the expanding abscess mass.

### Localised pressure

Specific signs of a brain abscess are dependant on the position of the abscess within the brain. Seizures are common as is a progressive drowsiness and delirium. Neurological deficits like abnormal speech, weakness and numbness may occur.

## INVESTIGATIONS

### Blood tests

There are no specific blood tests to diagnose a brain abscess although these may demonstrate the presence of the source of a brain abscess. Routine FBE, electrolytes and clotting profiles will be performed prior to operative removal of a brain abscess. The inflammatory markers (CRP and ESR) will be measured as a marker of the severity of the infection.

### Septic screen

This will include at least 3 blood cultures.

### Radiological tests

- CT Head – a CT head with contrast is diagnostic of a brain abscess.
- MRI Head – this give further information with regards to possible sources of the abscess as well as being able to demonstrate smaller separate abscesses not seen on CT.