

Understanding a Burr Hole Procedure

Burr holes are small holes that a neurosurgeon makes in the skull. Burr holes are used to help relieve pressure on the brain when fluid, such as blood, builds up and starts to press on brain tissue. This buildup of blood is dangerous. As the blood builds, it pushes up against the skull and has nowhere to go. If the blood starts to compress the brain, it can lead to symptoms or even death if not treated.

Layers around the brain

Your brain sits inside a bony skull. Inside your skull are several layers of tissue called the meninges. These layers cover and protect the brain. The layer just inside the skull is called the dura mater, or just dura. It's a tough, fibrous layer of tissue.

Why burr holes are used

One of the most common reasons burr holes are needed is for a subdural hematoma. This is when blood slowly builds up under the dura layer after a mild head injury. The veins there are fragile and easy to break, especially in older adults. This can lead to symptoms like headache, changes in behavior, seizures, and one-sided muscle weakness. If the blood continues to build, it may cause coma and brain damage.

There are other reasons why you might need a burr hole procedure. Neurosurgeons may do a burr hole procedure to relieve pressure around the brain because of:

- A sudden (acute) subdural hematoma
- An ongoing (chronic) subdural hematoma
- Bleeding in the area around the spinal cord (epidural hematoma)
- Certain kinds of brain cancer
- Buildup of pus around the meninges
- Buildup of cerebrospinal fluid (CSF) around the brain (hydrocephalus)
- Certain kinds of bleeds from the brain itself (rare)

How a burr hole procedure is done

You will be given medicine to make you relaxed or sleep. The surgery team will trim the hair on your scalp in the area of surgery. They will inject numbing medicine into your scalp. The surgeon will make a cut (incision) in your scalp. Using a special drill, the surgeon will drill 1 or 2 small holes in the skull to reach the dura. He or she then opens the dura and drains any excess fluid. The surgeon may put a temporary drain in place to continue to drain the fluid. Or he or she may close the dura and scalp right away.

Risks of a burr hole procedure

All surgery has risks. The risks of a burr hole procedure include:

- Bleeding
- Infection
- Blood clots
- Brain injury
- Heart attack or stroke
- Problems with anesthesia
- No relief from symptoms and need for a surgery such as a craniotomy

Your own risks may vary according to your age, your general health, and the reason for your procedure. Talk with your healthcare provider to find out what risks may apply to you.

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