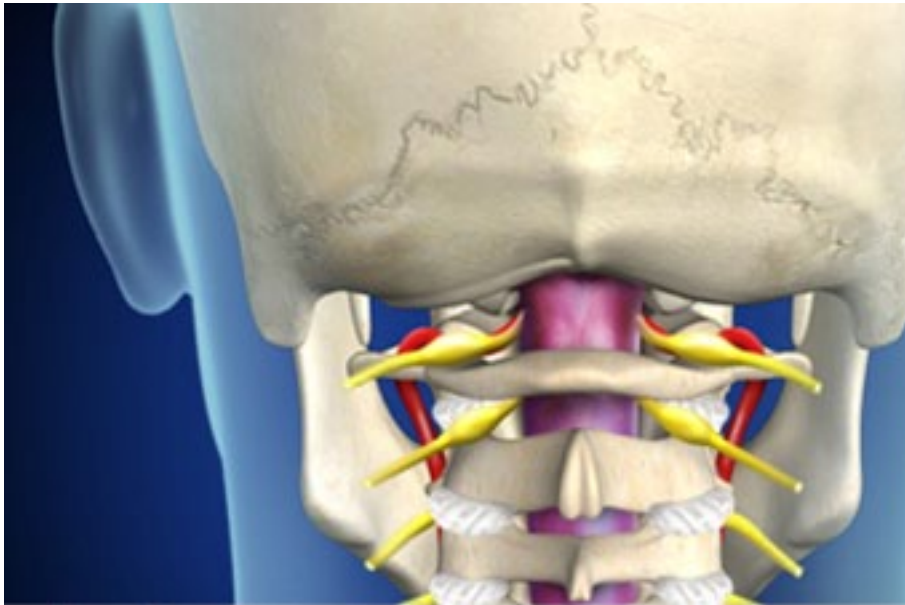


Craniectomy for Chiari Malformation (Foramen Magnum Decompression)



Overview

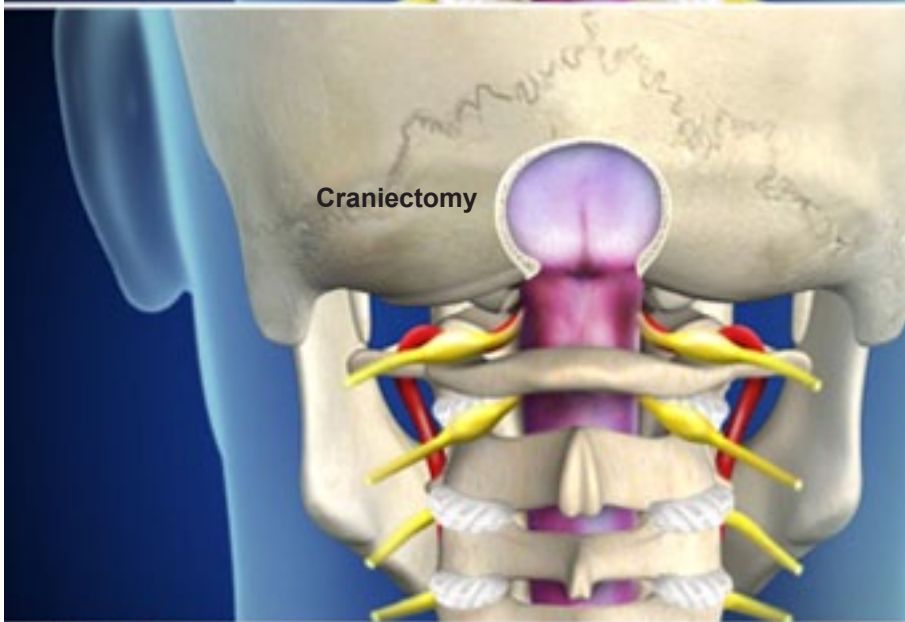
This surgery is used to treat Chiari malformation, an abnormality that results in a part of the brain extending into the upper spinal canal. During the procedure, small sections of bone are removed from the rear of the skull and spine to create more space for the errant brain tissue.

Preparation

The patient is anesthetized, and a portion of the scalp is shaved. The patient's head is secured to prevent movement.

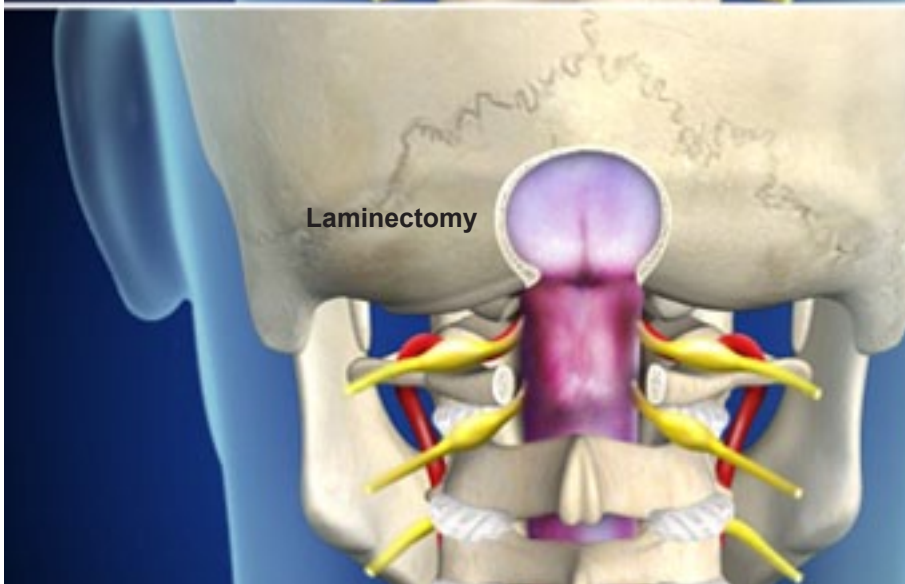
Accessing the Bone

The surgeon creates an incision in the back of the head extending down to the upper neck in the midline. The soft tissue and upper neck muscles are pulled back to expose the skull and first vertebra.

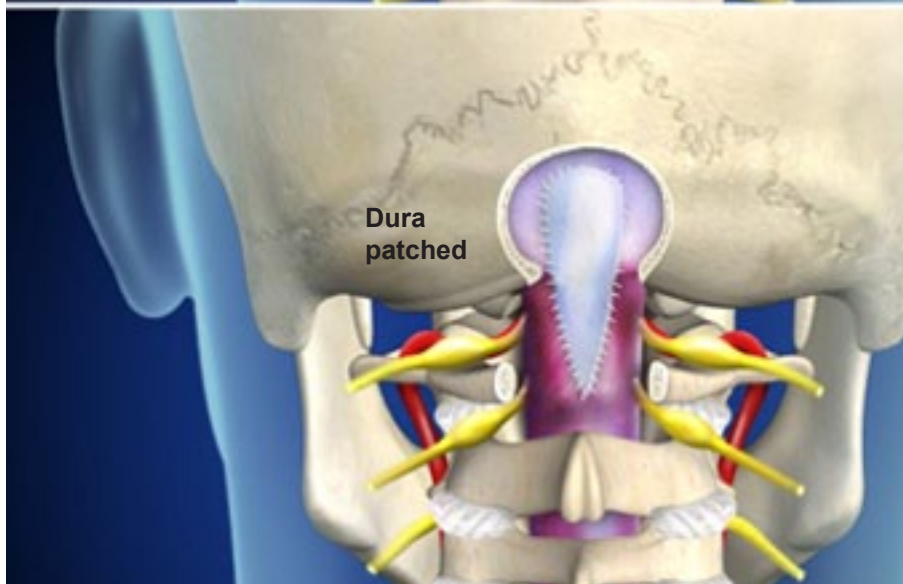
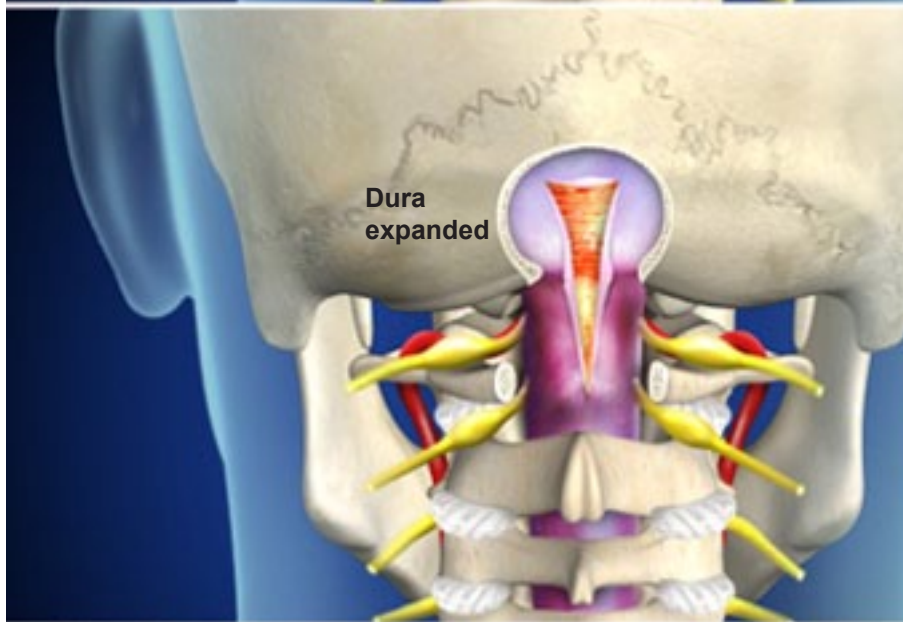
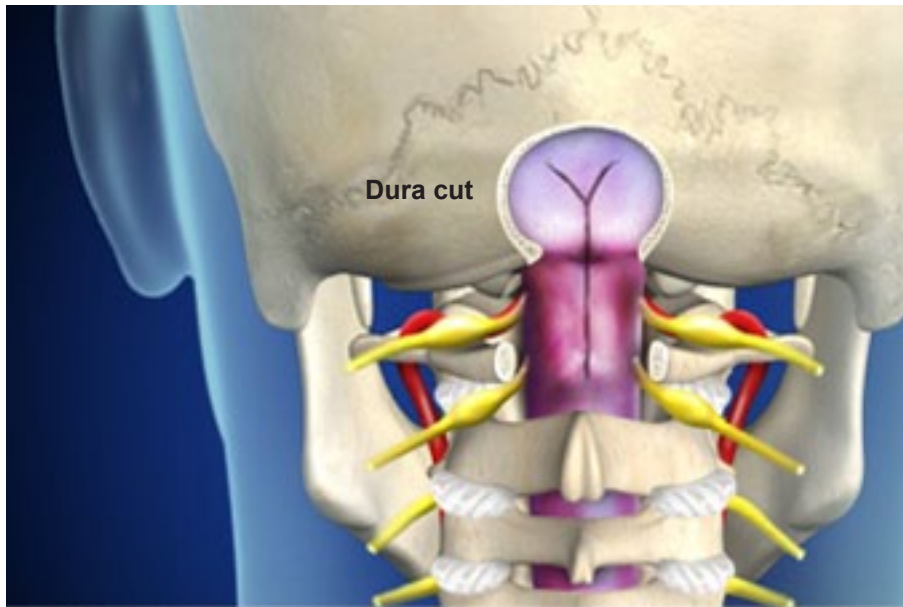


Removing Bone

Using a high-speed drill with a cutting burr, the surgeon removes a section of bone at the base of the skull to create more space for the brain. This is called a craniectomy. Then, the surgeon removes the back arch of the C1 vertebra. This is known as a laminectomy. Depending on the level of abnormality, lamina from one or more vertebrae may need to be removed.



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Expanding the Dura

In most cases, more space also needs to be created in the dura (the membrane that covers the brain). The surgeon creates a Y-incision in the dura so that it can expand, and then patches it with a natural or synthetic graft material.

End of Procedure

The hole in the bone is left open. In some cases, a small strip of titanium mesh may be placed across the top portion of the hole in the skull to provide a place for the muscles to reattach. The muscles are closed and the skin flap is folded back and sutured into place.

Aftercare

The patient will require a hospital stay of a few days after the procedure. During recovery, the patient's mental and physical status is monitored. Full recovery usually takes several weeks, and the patient may feel fatigued.