

Chiari Decompression

University Neurosurgery Information Sheet

General indications for the procedure:

A sub occipital craniectomy (SOC) is the procedure often needed to alleviate the pressure and obstruction that takes place in the area of the skull base where the spinal cord meets the brain.

Description of the procedure:

After the patient is put to sleep by the anesthesiologist, he/she is positioned face down while the head is being held by a special device that pins onto the skull via the scalp. After some hair is shaved from where the back of the head meets the neck, an incision is made down the midline. This allows access to the skull bone that sits just on top of the spine. Some of this bone is drilled off. Sometimes, some of the upper spine bones need also be removed. Then, the membrane underneath (dura) is commonly opened to contribute to widening the “bottle neck”. At this point, the surgeon may elect to place a patch of material to widen the membrane space. Different kinds of patches are available and they include some of the patient’s own tissue (a membrane that attaches to the skull just above from where the bone was drilled) or commercially available materials. The incision is closed in multiple layers.

Procedure alternatives, if any:

The treatment of a Chiari malformation is usually something that does not need to be done urgently. For that reason, there may be the option to further watch the symptoms to see if there are any improvements.

Probable consequences of refusing procedure:

If a significantly symptomatic Chiari is not treated, the pain and other neurological symptoms may progress so that there may be further headaches, numbness, tingling, the formation of a fluid cavity inside the spinal cord, and problems with movement of the limbs which can affect gait.

Risks of the procedure:

The risks include, but are not limited to: Persistence of headaches and/or other symptoms such as numbness and tingling, infection of spinal fluid with or without bacteria, need to re-operate to replace or clean dural patch, leak of spinal fluid, hydrocephalus, need to place VP shunt, stroke, involvement of spinal cord with paralysis, fluid accumulation under skin, need to re-operate to drain fluid, blood clot, pain, seizures, coma, and death.

Person(s) performing the procedure:

The surgical team for this procedure is large. This involves, but is not limited to, the attending surgeons, resident surgeons, surgical nurses, physician assistants, surgical technologists and anesthesiologists. Everyone involved will be performing important tasks related to the surgery in accordance with the hospital policies, and based on their skill set and under the supervision of the responsible practitioners.