# Petrosectomy

Petrosectomy is a surgical procedure that involves the removal of a portion or all of the petrous part of the temporal bone, which is located in the skull. The petrous part of the temporal bone contains several important structures, including the inner ear, facial nerve, and several important blood vessels.

Petrosectomy is typically performed by neurosurgeons or otolaryngologists (ear, nose, and throat specialists) and is used for various medical conditions and surgical purposes, including:

Treatment of Skull Base Tumors: Petrosectomy is often used in cases of skull base tumors, particularly when these tumors involve the petrous bone. The procedure allows surgeons to access and remove these tumors while minimizing damage to surrounding structures.

Cholesteatoma Surgery: Cholesteatoma is an abnormal skin growth in the middle ear that can erode surrounding bone. Petrosectomy may be required to remove cholesteatoma and reconstruct damaged middle ear structures.

Facial Nerve Decompression: When there is compression of the facial nerve within the petrous bone (e.g., due to tumors or trauma), petrosectomy can provide access to the nerve for decompression or surgical repair.

Inner Ear Procedures: Some inner ear disorders and conditions may necessitate petrosectomy to access the inner ear for treatment or surgical procedures, such as cochlear implantation or vestibular nerve section.

The specific type and extent of petrosectomy performed depend on the patient's condition and the surgical goals. There are various surgical approaches, such as translabyrinthine, retrosigmoid, and others, which may be used depending on the location and extent of the pathology.

Petrosectomy is a complex and delicate procedure that requires a high level of surgical skill and expertise. Risks associated with this surgery can include hearing loss, damage to surrounding structures, and complications related to the proximity of critical nerves and blood vessels. Patients considering petrosectomy should consult with their healthcare providers and surgeons to thoroughly discuss the risks, benefits, and expected outcomes of the procedure.

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see Anterior petrosectomy.

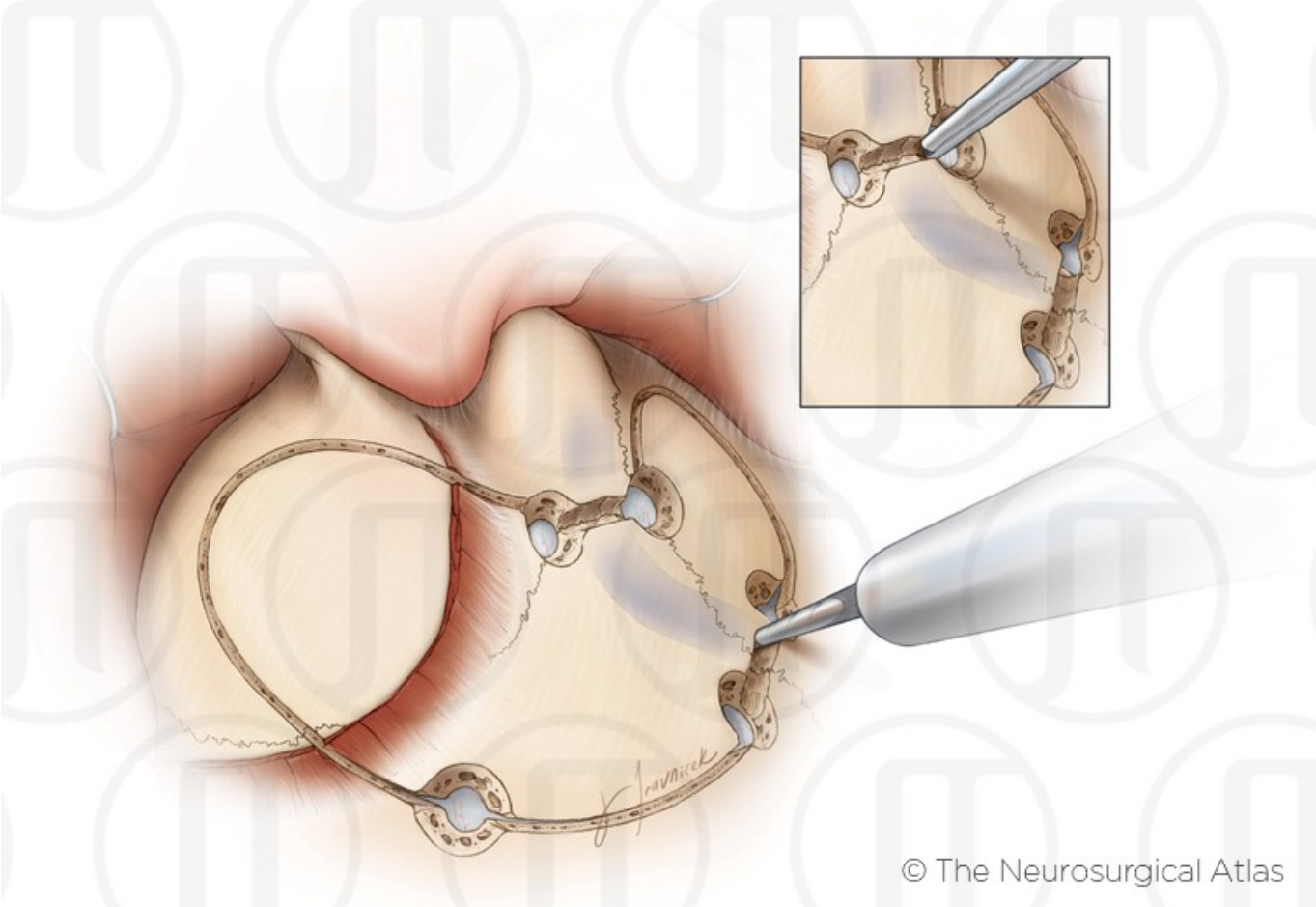
see Endoscopic petrosectomy.

see Transpetrosal approach.

Retrosigmoid intradural inframeatal petrosectomy

Having dissected and reflected the temporalis muscle and sternocleidomastoid muscles, the craniotomy is performed by placing burr holes on either side of the sigmoid sinus and transverse sinus. Four burr holes are utilized, two on each side of the sinuses (near the junction of the transverse and sigmoid sinuses). Using the intersecting suture junctions as anatomical landmarks, an accurate

position of the sigmoid and transverse sinus can be calculated. Bone is drilled and the sections covering the sinus are separately and carefully removed.

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The posterior petrosectomies involve progressive, stepwise drilling of the petrous bone:

Presigmoid retrolabyrinthine approach

Translabyrinthine approach

Transcochlear approach