

Neuroendoscopy Indications

- [Transforaminal Full-Endoscopic Surgery for Lumbar Foraminal Pathologies: A Comparative Clinical Effectiveness Study](#)
 - [Success Rate of Endoscopic Third Ventriculostomy in Children Younger Than 1 Year With Idiopathic Congenital Aqueductal Stenosis and Long-term Follow-up](#)
 - [Technical Feasibility and Safety of Transpedicular Thoracic Partial Corpectomy Using Biportal Endoscopic Technique: A Novel Approach for Separation Surgery in Spinal Metastatic Disease](#)
 - [Clinical and radiologic criteria to predict endoscopic third ventriculostomy success in non-communicating pediatric hydrocephalus](#)
 - [Advancements of Endoscopic Surgery for Spontaneous Intracerebral Hemorrhage](#)
 - [Neuroendoscopic Surgery for Intraventricular Cavernous Malformations: A Review on Indications and Surgical Considerations](#)
 - [Endonasal Route for Tuberculum and Planum Meningiomas](#)
 - [Stented endoscopic third ventriculostomy: technique, safety, and indications-a multicenter multinational study](#)
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Endoscopic aspiration for basal ganglia hemorrhage evacuation

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In general, [neuroendoscopy](#) is used in [procedures](#) with preexisting or pathologically formed cavities in the [central nervous system](#). Commonly performed [neuroendoscopic procedures](#) include [endoscopic third ventriculostomy](#) (ETV), choroid plexus coagulation, biopsy or removal of intraventricular or periventricular tumors, drainage or excision of [arachnoid cyst](#) or [colloid cyst](#), and retrieving displaced shunts.

[Dandy-Walker malformation treatment](#)

Neuroendoscopic procedures have also been used to evacuate [intracerebral hematoma](#), septated [chronic subdural hematoma](#), subacute or chronic [brain abscess](#), and endocavitary syringostomy

see also [Microendoscopic Spine Surgery](#).

Neuroendoscopy is now considered to be a minimally invasive surgical approach for expanding lesions bulging into the [ventricle](#), and it is also considered to be a relevant tool for performing [biopsy](#) procedures, fenestration of cystic walls, or for performing tumor removal in selected cases. Furthermore, the use of neuroimaging and the accurate follow-up of brain tumor patients have allowed the documentation of tumoral and pseudotumoral cystic areas that cause the obstruction of cerebrospinal fluid (CSF) pathways. Neuroendoscopic procedures enable the fenestration of cystic lesions, in addition to enabling [third ventriculostomy](#) or [septostomy](#) to restore CSF pathways.

The result of using neuroendoscopy is the reconstruction of CSF pathways that bypass the tumor occlusion. This surgical procedure is not only limited to the relief of noncommunicating hydrocephalus, but it is also useful for tumor removal or biopsies and the evacuation of cystic lesions. In patients affected by malignant tumors, neuroendoscopy can be performed to control intracranial hypertension before the patients start adjuvant chemotherapy or radiotherapy ¹⁾.

Impact of mobile neuroendoscopy in the development of neurosurgery in [Africa](#). An original Spanish model ²⁾.

[Endoscopic neurosurgery](#) ("channel" endoscopy) is mainly used in [ventricle endoscopy](#). The [neurosurgical instruments](#) are introduced via working channels that are located within the [endoscope](#).

Endoscope-controlled microneurosurgery means that the endoscope is the only visualization tool and microsurgical instruments are used along the endoscope. Major applications are endonasal endoscopic skull base surgery, endoport surgery, and endoscopic transcranial surgery.

Endoscope-assisted microneurosurgery means that the microscope and the endoscope are used in the same surgery. The endoscopes are applied when hidden structures to be inspected are not visible in straight line with the microscope.

Endoscopic techniques are a valuable addition to the neurosurgeon's armamentarium. Endoscopes are especially beneficial in deep and narrow surgical approaches and when "looking around a corner" is required ³⁾.

It is increasingly being used in the management of [intraventricular tumors](#). The role of endoscopy for diagnostic biopsy is well established. Expansion of these techniques may allow for definitive resection of [intraventricular tumors](#).

[Endoscopic endonasal approach](#)

[Endoscopic Neurosurgery](#) is currently recommended as the first choice to treat [posterior fossa arachnoid cysts](#).

[Endoscopic surgery](#) for any type of [skull base defect](#) is the gold standard. The size of the defects does not seem to play a significant role in the success rate. Fascia lata and mucoperiosteum of the turbinate allow a two-layer reconstruction of small and mid-sized defects. For larger skull base defects, a combination of fat, fascia lata, and nasoseptal pedicled flaps provides a successful reconstruction ⁴⁾.

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Oppido PA. Endoscopic Reconstruction of CSF Pathways in Ventricular Tumors. Acta Neurochir Suppl. 2017;124:89-92. doi: 10.1007/978-3-319-39546-3_14. PubMed PMID: 28120058.

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Piquer J, Qureshi MM, Young PH. [Impact of mobile neuroendoscopy in the development of neurosurgery in Africa. An original Spanish model]. Neurocirugia (Astur). 2014 May-Jun;25(3):145-8. doi: 10.1016/j.neucir.2014.03.001. Epub 2014 Apr 13. Spanish. PubMed PMID: 24726264.

³⁾

Schroeder HW. General principles and intraventricular neuroendoscopy: endoscopic techniques. World Neurosurg. 2013 Feb;79(2 Suppl):S14.e23-8. doi: 10.1016/j.wneu.2012.02.031. Epub 2012 Feb 10. Review. PubMed PMID: 22381832.

4)

Bernal-Sprekelsen M, Rioja E, Enseñat J, Enriquez K, Viscovich L, Agredo-Lemos FE, Alobid I. Management of anterior skull base defect depending on its size and location. Biomed Res Int. 2014;2014:346873. doi: 10.1155/2014/346873. Epub 2014 May 7. PubMed PMID: 24895567; PubMed Central PMCID: PMC4033343.

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