

Endoscopic endonasal approach for cerebrospinal fluid leakage

The [endoscopic endonasal approach](#) was the preferred method for repairing CSF leaks with or without an encephalocele in pediatric patients. Compared to traditional operations, this endoscopic procedure is minimally invasive, efficient, and safe ¹⁾.

Patients were positioned supine in a Mayfield headholder in slight extension. A complete ethmoidectomy was performed to expose the defect. The middle turbinate was removed to increase visualization and allow for more working room. The defect was identified and exposed. A nasoseptal flap was raised and placed over the defect. A free-mucosal graft fashioned from the removed middle turbinate was placed on the nasoseptal donor site. The video can be found here:

<http://youtu.be/gAN2cvQVXCE> ²⁾.

Case series

Ma et al. retrospectively reviewed the records of pediatric patients who underwent transnasal endoscopic repair of CSF leak with or without a [meningocele](#) or an [encephalocele](#) at Beijing Tongren Hospital, Capital Medical University, between July 2003 and May 2014. All patients had preoperative radiological evaluations and underwent endoscopic endonasal repair of their skull base defects.

Altogether, 23 children (mean age 7.0 years) underwent the procedures. Sixteen cases were congenital, and 7 patients had trauma history. The herniations or defects included meningoencephaloceles in 15 cases, meningoceles in 4 cases, and CSF leak in 4 cases (2 patients had bilateral leaks). The leak or herniation sites were ethmoid roof in 10 patients (one was bilateral), cribriform plate in 5, lateral to the foramen cecum in 3, posterior wall of the frontal sinus in 1, sphenoid sinus in 2, lateral recess of the sphenoid sinus in 1, and sella turcica base in 2. All subjects had favorable clinical outcomes without recurrence during a follow-up of 6-123 months (mean 61.1 months).

The endoscopic endonasal approach was the preferred method for repairing CSF leaks with or without an encephalocele in pediatric patients. Compared to traditional operations, this endoscopic procedure is minimally invasive, efficient, and safe ³⁾.

¹⁾ , ³⁾

Ma J, Huang Q, Li X, Huang D, Xian J, Cui S, Li Y, Zhou B. Endoscopic transnasal repair of cerebrospinal fluid leaks with and without an encephalocele in pediatric patients: from infants to children. Childs Nerv Syst. 2015 May 15. [Epub ahead of print] PubMed PMID: 25976865.

²⁾

Tormenti MJ, Paluzzi A, Pinheiro-Nieto C, Fernandez-Miranda JC, Snyderman CH, Gardner PA. Endoscopic endonasal repair of spontaneous CSF fistulae. J Neurosurg. 2012 Jan;32 Suppl:E6. PubMed PMID: 22251254.

From:
<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:
https://neurosurgerywiki.com/wiki/doku.php?id=endoscopic_endonasal_approach_for_cerebrospinal_fluid_leakage

Last update: **2024/06/07 03:00**



