

Neuroendoscopic access to the third ventricle

One of the critical steps for the success of intraventricular [neuroendoscopic procedures](#) is the entry into the [third ventricle](#) and passage of the [endoscopy](#) system through the [foramen of Monro](#) (FM). A diameter larger than that of the instrument used is considered a prerequisite for safely performing the technique, as damage to this structure can lead to alterations in the [fornix](#) and vascular structures. When the foramen diameter is narrow and there is no obstruction/stenosis, the role of [foraminoplasty](#) in reducing the risk of complications has not been adequately assessed in the literature.

A review of endoscopic procedures conducted at the Department of Neurosurgery, Torrecárdenas University Hospital, [Almería](#), since 2018 was undertaken. Cases in which preoperative imaging indicated a FM diameter < 6 mm and foraminoplasty technique was applied were examined to determine the technical and functional success of the procedure. The technical success was determined by completing the neuroendoscopic procedure with the absence of macroscopic lesions in the various structures comprising the foramen and without complications in the follow-up imaging tests. Functional success was defined as the absence of [cognitive/memory alterations](#) during the 3-month postoperative follow-up. Additionally, a review of the various forms of foraminoplasty described in the literature is conducted.

In the cohort, six patients were identified with a preoperative FM diameter < 6 mm without obstruction or stenosis. Foraminoplasty was planned for these cases to facilitate various intraventricular neuroendoscopic procedures. In all instances, the technique was successfully performed without causing macroscopic damage to the structures comprising the foramen. Follow-up visits included various cognitive tests to assess potential sequelae related to microscopic damage to the fornix. None of the patients exhibited anomalies.

Conclusion: [Foraminoplasty](#) in patients with a narrow FM without signs of stenosis/obstruction is a useful technique to reduce the risk of complications during the passage of the endoscopy system through this structure, enabling the safe performance of neuroendoscopic procedures ¹⁾.

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Guil-Ibáñez JJ, Gomar-Alba M, García-Pérez F, Saucedo L, Narro-Donate JM, Vargas-López AJ, Parrón-Carreño T, Castro-Luna GM, Contreras-Jiménez A, Masegosa-González J. Neuroendoscopic access to the third ventricle in patients with narrow foramen of monro without stenosis/obstruction: role of foraminoplasty. Acta Neurochir (Wien). 2024 Apr 29;166(1):197. doi: 10.1007/s00701-024-06077-z. PMID: 38683412.

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