Entrapped temporal horn

An entrapped temporal horn (ETH) is one of the critical complications after tumor removal in the lateral ventricle trigone that sometimes becomes life-threatening.

Toyookaet al. sought to develop a novel intraoperative method of prophylactic intraventricular piping (PIP) just after tumor removal to prevent ETH.

Three patients with meningiomas in the lateral ventricle trigone were treated by a novel intraoperative method of PIP just after tumor removal to prevent ETH. Silicone catheters normally used as ventricular drainage catheters were cut to 5- to 6-cm length and inserted into the tumor cavity to ensure communication between the temporal horn and the atrium or the body of the lateral ventricle through the piping straddling the trigone.

None of the patients developed ETH during the follow-up period without complications caused by the tube placement.

PIP might be beneficial to prevent ETH because constant osmotic pressure and constant cerebrospinal fluid pulse wave transmission are maintained between each compartment of the lateral ventricle [1)].

Currently, there are few reports on this complication.

A retrospective analysis of the clinical data of 87 patients with trigone meningioma from 2010 to 2018 was performed, and univariate and multivariate analyses were used to assess the risk factors associated with postoperative ETH. The degree of ETH was evaluated using the modified ventriculocranial ratio.

Results: The incidence of postoperative ETH in trigone meningioma was 29.9% (26/87). Preoperative ETH [odds ratio (OR): 4.826, 95% confidence interval (CI): 1.820-12.796, P = 0.002] and postoperative meningitis (OR: 12.811, 95%CI: 1.615-101.605, P = 0.016) are independent risk factors for postoperative ETH. Of the 18 patients with ETH syndrome, 12 improved after medical treatment, and finally, a total of 6 patients received ETH surgery. The mean duration from tumor resection to the appearance of ETH syndrome was 3.1 ± 1.9 months (range: 9 days-7 months). Patients with ETH grade II and III are more prone to clinical symptoms.

Conclusions: The incidence of postoperative ETH for trigone meningiomas is high, and clinical symptoms generally appear delayed after surgery. Reducing postoperative infections can reduce the occurrence of postoperative ETH. Patients with symptoms of ETH who have failed medical treatment have clear indications for surgery [2)]

1)
Toyooka T, Takeuchi S, Otani N, Kumagai K, Tomiyama A, Wada K, Mori K. Prophylactic Intraventricular Piping Method Prevents Entrapped Temporal Horn After Removal of Ventricle Trigone Meningioma: Technical Note. World Neurosurg. 2022 Dec;168:13-18. doi: 10.1016/j.wneu.2022.09.040. Epub 2022 Sep 15. PMID: 36115563.
2)
Liu S, Liu X, Wang M, Wang Z. Risk Factors for and Outcomes of Postoperative Entrapped Temporal Horn in Trigone Meningiomas. Neurol India. 2022 May-Jun;70(3):965-971. doi: 10.4103/0028-3886.349637. PMID: 35864626.