

Primary Tumors of the Lateral Ventricles of the Brain

L. Dănăilă

Department of Vascular Neurosurgery, National Institute of Neurology and Neurovascular Diseases
Bucharest, Romania

Abstract

Background: The lateral ventricles are located in the center of the brain. Each ventricle lies in contact with five critical neural structures: the caudate nucleus, the thalamus, the fornix, the corpus callosum, and the genu of internal capsule. The authors report their experience in primary tumors of the lateral ventricles of the brain by analysing the symptomatology, the surgical treatment, the complications and the postoperative results.

Objective: To determine the importance of the surgical technique on the morbidity and the recurrence of lateral ventricles tumors. Total surgical resection followed by radiotherapy and/or chemotherapy had been the main objective in the cases of anaplastic tumors.

Methods: This retrospective study makes reference to 202 primary tumors of the lateral ventricles operated by Leon Danaila between 1982 and 2012. The respective analysis is based on the operative approaches and on the extent of resection. The surgical access routes were the interhemispheric transcallosal approach and the transcortical approach.

Results: A number of 177 (87%) of the primary tumors of the lateral ventricles were benign (low grade lesions), while 25 (12.37%) of them were anaplastic. The most frequent tumors were ependymomas, astrocytomas, subependymomas, choroid plexus papillomas and meningiomas. Out of the total of 202 tumor cases, 164 (81.18%) were discharged with very good and good results, 35 (17.32%) were left with neurological deficits, and 3 (1.48%) died. A significant proportion of the patients undergoing surgery develop cerebrospinal fluid outflow obstruction, and this fact made the postoperative mounting of a number of ventricular shunts necessary.

Conclusion: The majority of these tumors were benign, with a relatively slow growth rate. Owing to this fact, the preoperative dimensions of the tumors were of several centimeters. The average age of the patients was lower than that of those with similar lesions located intraparenchymatously. The symptoms were determined by the ventricular outflow obstruction and by the affectation of the periventricular structures. Interhemispheric transcallosal and transcortical approaches were the best surgical access routes.

Key words: lateral ventricle, microsurgery, primary tumors

Corresponding author: Acad. Prof. Leon Dănăilă

Department of Vascular Neurosurgery

National Institute of Neurology and Neurovascular Diseases Bucharest

Romania

E-mail: leondanaila@neuroch.info