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Natural history of intraventricular meningiomas: systematic review.

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Abstract

Review the data published on the subject to create a more comprehensive natural history of intraventricular meningiomas (IVMs). A Medline search up to March 2018 using "intraventricular meningioma" returned 98 papers. As a first selection step, we adopted the following inclusion criteria: series and case reports about IVMs, as well as papers written in other languages, but abstracts written in English were evaluated. Six hundred eighty-one tumors were evaluated from 98 papers. The majority of the tumors were located in the lateral ventricles (602-88.4%), fourth ventricle (59-8.7%), and third ventricle (20-2.9%). These tumors accounted for a mortality rate of 4.0% (25 deaths) and a recurrence rate of 5.3% (26 recurrences). The majority of the tumors were grade I (89.8%) and consisted of the following subtypes: fibrous, 39.7% (n = 171); transitional, 22.0% (n = 95); meningothelial, 18.6% (n = 80); angiomatous, 3.2% (n = 14); psammomatous, 2.6% (n = 11); and others, 13.9% (n = 60). Forty-five patients (7.4%) presented with grade II (GII) tumors, and 17 patients (2.8%) presented with grade III (GIII) tumors. These tumors follow the histopathological distribution of meningiomas in general, with the exception of the higher prevalence of the fibrous subtype, possibly due to its embryonic origin. Recurrence and mortality were lower than in other localizations likely due to a complete surgical resection rate than in the convexity and skull base, which suggests that GTR is the gold standard for the management of IVMs.

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