Parasagittal meningiomas arise from the arachnoid cells of the angle formed between the superior sagittal sinus (SSS) and the brain convexity. In this retrospective study, we focused on factors that predict early recurrence and recurrence times.

We reviewed 125 patients with parasagittal meningiomas operated from 1985 to 2014. We studied the following variables: age, sex, location, laterality, histology, surgeons, invasion of the SSS, Simpson removal grade, follow-up time, angiography, embolization, radiotherapy, recurrence and recurrence time, reoperation, neurologic deficit, degree of dependency, and patient status at the end of follow-up.

Patients ranged in age from 26 to 81 years (mean 57.86 years; median 60 years). There were 44 men (35.2%) and 81 women (64.8%). There were 57 patients with neurologic deficits (45.2%). The most common presenting symptom was motor deficit. World Health Organization grade I tumors were identified in 104 patients (84.6%), and the majority were the meningothelial type. Recurrence was detected in 34 cases. Time of recurrence was 9 to 336 months (mean: 84.4 months; median: 79.5 months). Male sex was identified as an independent risk for recurrence with relative risk 2.7 (95% confidence interval 1.21-6.15), P = 0.014. Kaplan-Meier curves for recurrence had statistically significant differences depending on sex, age, histologic type, and World Health Organization histologic grade. A binary logistic regression was made with the Hosmer-Lemeshow test with P > 0.05; sex, tumor size, and histologic type were used in this model.

Male sex is an independent risk factor for recurrence that, associated with other factors such as tumor size and histologic type, explains 74.5% of all cases in a binary regression model. [1)]

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Escribano Mesa JA, Alonso Morillejo E, Parrón Carreño T, Huete Allut A, Narro Donate JM, Méndez Román P, Contreras Jiménez A, Pedrero García F, Masegosa González J. Risk of Recurrence in Operated Parasagittal Meningiomas: A Logistic Binary Regression Model. World Neurosurg. 2018 Feb;110:e112-e118. doi: 10.1016/j.wneu.2017.10.087. Epub 2017 Oct 26. PubMed PMID: 29107168.