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RISK FACTORS FOR POSTOPERATIVE RECURRENT IN PATIENTS WITH CONVEXITY, PARASAGITTAL AND FALX MENINGIOMAS

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OBJECT: Meningioma has cases of repeated recurrence. Regarding convexity, parasagittal, and falx, which are representative sites of occurrence, the treatment results and prognostic factors were investigated.

METHOD: The group consisted of patients with meningioma who underwent surgical treatment at our department from January 2009 to June 2022. Tumor sites, tumor size, Simpson grades at the time of surgery, pathological findings, WHO grades, and MIB-1 labeling index (LI) were reviewed to investigate their association with the period from the first surgery to recurrence (PFS).

RESULT: The subjects were 98 cases (62 women and 36 men) aged from 21 to 87 (median age of 60.0). Convexity: 49 cases (50.5%), parasagittal: 29 cases (29.9%), falx: 20 cases (20.4%). The WHO grades were G1: 52 cases (53.6%), G2: 41 cases (41.8%), and G3: 5 cases (5.2%). Recurrence was observed in 19 of 98 cases (19.4%). Upon conducting a univariate analysis, prognostic factors significantly correlated with PFS were found to include parasagittal occurrence (P < 0.001), WHO grade 2/3 (P < 0.001), MIB-1 LI > 10.0 (P < 0.001), no p53/p16 expression (P < 0.05), tumor size > 40 mm (P < 0.001). Recurrence was observed in 12 of 29 cases (41.4%) occurring in the parasagittal region, with a rate of recurrence (P < 0.001) that was significantly high in comparison with that of 7 of 65 cases (11.1%) of convexity and falx meningiomas. Two or more recurrences were observed in 10 cases (10.2%), with 7 cases occurring in the parasagittal region. 6 cases (6.1%) died of tumor progression (parasagittal: 3 cases, convexity: 2 cases, falx: 1 case). CONSIDERATION: The recurrence rate of parasagittal meningioma is significantly higher than that of convexity or falx meningioma. It is necessary to consider adjuvant therapy while taking into consideration classic risk factors such as WHO grades, MIB-1 LI, and tumor size.