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Neurogenic tumors of the sacrum. 10 years experience of a single institution

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Introduction: According to various authors, presacral and sacral tumors account less than 5-7% of all spinal tumors. Slow growth and non-specific symptoms often do not allow for timely diagnosis of the disease.

Methods: From 2002 to 2012, 62 patients were operated with paravertebral and presacral neurogenic tumors. The study included 21 patients with lesions of the sacrum. Men-5 and 16 were women. The patients' ages ranged from 22 to 69 years, mean age 39 years. Benign tumors were observed in 17 (81%) patients, malignant 4 (19%). Schwannoma verified in 15 (71.5%) cases, neurofibroma 4 (19%), ganglioneuroma 2 (9.5%). Before surgery, all patients evaluated by Karnofsky, Frankel, Klimo scales. Pain syndrome was estimated on VAS and Watkins scale. The first step was sacral laminectomy with resection or root sparing microsurgery and the posterior mobilization of the tumor. The second stage included anterior endoscopic or open approach in cases of large intrapelvic component, for remove presacral tumor component.

Results: 21 operations were performed. Two patients underwent surgery treatment from the posterior approach, three ones with anterior and 16 with combined approach. In 8 cases the operation was performed with endoscopic stage. Follow-up was 3 to 120 months; the median time was 55 months. 2 patients died. One as a result of the progression of the underlying disease (malignant schwannoma G3, associated with neurofibromatosis type 1), and one because of early postoperative complications (wound infection, meningitis). Recurrence was observed in two cases of malignant schwannomas what were associated with nonradical surgical treatment and large tumor size. In one case after endoscopic removing of presacral tumor developed bleeding that required urgent revision surgery.

Conclusions: Surgical treatment of patients with neurogenic tumors involves the sacrum gives good functional and oncological outcome. High-grade tumors in combination with neurofibromatosis have a worse prognosis as the most of the high risk of relapse, and life expectancy. The use of two stage surgical treatment increased the possibilities of radical operation in patients with the tumor of sacrum. Using of the endoscopic technique allows decreasing a blood loss, wound complications, and improving a cosmetic effect and rehabilitation.

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