Sacral Spinal Schwannoma

see also Giant Sacral Schwannoma.

Sacral spinal schwannomas are very rare, and the incidence of sacral schwannoma ranges from 1-5% of all spinal schwannomas, and only around 50 cases are reported in the literature.

There are 3 defined types of sacral schwannomas. These are retroperitoneal or presacral, intraosseous, and spinal schwannomas. Patients commonly present with complaints of pain and paresthesia due to the spinal schwannoma extending to extra spinal tissues. Direct x-ray, CT, MRI, and scintigraphy are used for preoperative diagnosis and treatment planning. Local recurrence and transformation to malignancy are very rare. For this reason, the frequently preferred treatments are subtotal removal of the mass or simple enucleation [1)].

Case series

11 sacral schwannoma cases operated at the Second Affiliated Hospital, School of Medicine, Zhejiang University, from 2012 to 2016, were investigated retrospectively and 10 were followed up. All patients were assessed with X-ray, CT and MRI, and underwent an intralesional excision.

One patient was male, nine were female and the average age was 48 (ranging between 31 and 63). Three patients suffered from back and leg pain, and seven had no obvious symptoms. The average blood loss during surgery was 980ml (ranging between 100 and 2,000ml). Six patients underwent preoperative biopsy. The surgeries were performed via the combination of an anterior and posterior approach in two patients, a posterior approach in seven patients, and an anterior approach in one patient. Residual tumors were not detected in all patients after surgery. Unfortunately, the postoperative complications occurred in three patients, namely bowel and bladder dysfunction (two patients) and cerebrospinal fluid leakage with secondary intracranial infection (one patient). The average follow-up was 22.7 months (8-44 months). All patients were relieved from preoperative symptoms after the last follow-up.

The typical findings of our cases in MRI were a well-circumscribed lesion with a heterogenous signal intensity on T2-weighted image, which may be helpful for preoperative decision-making. Intralesional excision can be successfully performed using single anterior or single posterior or both, and is an important procedure in the treatment of sacral schwannomas [2)].

Chandhanayingyong et al. presented the management and outcomes of sacral schwannoma in 4 patients treated with intralesional curettage and postoperative radiation. There were 3 women and one man (average age: 45.5 years) with long duration of lumbosacral pain with or without radiculopathy. Intralesional curettage was performed by posterior approach and adjuvant radiation therapy with dosage of 5000-6600 cGy was given after surgery. The mean follow-up time was 18 months (range 4-23 months). Symptoms of radiculopathy had decreased in all patients. The recent radiographic findings show evidence of sclerosis at the sacrum one year postoperatively, but the size was unchanged. Intralesional curettage and adjuvant radiation therapy can be used in the treatment

of sacral schwannoma to relieve symptoms and preserve neurological function [3)].

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