Spinal extradural meningioma

Spinal extradural meningiomas account for approximately 7% of all spinal meningiomas and are most commonly located in the thoracic spine.

The vast majority (90%) of spinal meningiomas are extramedullary/intradural in location. Occasionally (5%) purely extradural tumours are found and the remainder (5%) have both intradural and extradural components taking on a dumbbell appearance [1)].

Although rare, they should be included in the differential diagnosis of an extradural contrast-enhancing mass. Prognosis depends greatly on the extent of surgical resection. If considered safe, complete resection should be attempted to decrease the risk of recurrence.

see Cervical spinal extradural meningioma.

Only 50 cases of purely extradural spinal meningiomas have been described since the publication of the earliest report in 1963 till 2014 [2)].

Wu et al., reviewed their experience in a surgical series of 12 patients with histologically proven, purely extradural en plaque meningiomas and discuss their clinical features, radiological findings, and long-term outcomes.

Clinical and imaging data of 12 patients with spinal extradural en plaque meningiomas treated at a single institution were retrospectively analyzed.

There were 5 male and 7 female patients, with a mean age of 39.9 years. The mean follow-up period was 74.8 months. Nine tumors were located in the cervical spine, 1 in the cervicothoracic spine, and 2 in the thoracic spine. All the tumors were confirmed as extradural en plaque meningiomas with sheetlike growth along the dura mater. Gross-total resection of the tumor with a well-demarcated dissection plane was achieved in 4 cases. Subtotal resection was achieved in 8 cases, 2 of whom underwent postoperative low-dose radiation therapy. The symptoms present before the surgery were improved in all cases at the last follow-up evaluation. The postoperative follow-up MRI showed no recurrence or regrowth in 4 cases with gross-total removal and 7 cases with subtotal removal during the mean follow-up periods of 58.0 months and 71.1 months, respectively. One patient experienced recurrence at 88 months after his initial subtotal removal and improved following a revision operation.

Spinal extradural en plaque meningiomas are amenable to surgery if complete removal can be achieved. Because of the encirclement of the dura that is characteristic of the tumors, complete resection is usually difficult, subtotal removal for spinal cord decompression is advised, and follow-up imaging is needed. The risk of long-term recurrence/regrowth of the lesions is low, and a good clinical outcome after total or subtotal removal can be expected [3)].

Our understanding of purely extradural spinal meningiomas is still incomplete and they may be easily confused with malignant neoplasms, much more common in this location.

Ben Nsir et al., report a rare case of a purely extradural thoracic spine meningioma in a 70-year-old man, with an unusual progression. In addition they discuss the pathogenesis of these tumors and the potential pitfalls in differential diagnosis and review the relevant literature concerning their treatment and outcome [4)].

1)

Osborn AG. Diagnostic neuroradiology. Mosby Inc. (1994) ISBN:0801674867.
[2] [3]
Wu L, Yang T, Deng X, Yang C, Zhao L, Yao N, Fang J, Wang G, Yang J, Xu Y. Spinal extradural en plaque meningiomas: clinical features and long-term outcomes of 12 cases. J Neurosurg Spine. 2014 Dec;21(6):892-8. doi: 10.3171/2014.7.SPINE13819. Epub 2014 Sep 19. PubMed PMID: 25237843.
[4]
Ben Nsir A, Boughamoura M, Mahmoudi H, Kilani M, Hattab N. Uncommon progression of an extradural spinal meningioma. Case Rep Surg. 2014;2014:630876. doi: 10.1155/2014/630876. Epub 2014 Aug 27. PubMed PMID: 25243091; PubMed Central PMCID: PMC4163413.

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