Spinal schwannoma epidemiology

- Update on Cancer and Central Nervous System Tumor Surveillance in Pediatric NF2-, SMARCB1-, and LZTR1-Related Schwannomatosis
- Adulthood consequences of spinal deformity surgeries in neurofibromatosis type 1 patients
- Tumour distribution and characteristics associated with poor surgical outcomes in patients with sporadic spinal schwannomas
- Epidemiology study on the prognostic factors of intradural extramedullary spinal tumors
- Epidemiology, tumour characteristics, treatment and outcomes associated with spinal nerve sheath tumours: a systematic review protocol
- Unilateral Hemilaminectomy as Primary Treatment for Spinal Cord Tumors: Retrospective Cohort of 38 Cases with a Minimum Follow-Up of 24 Months
- Quality of life and neurological symptoms in patients with neurofibromatosis type 2: a national database study in Japan
- Epidemiological features of spinal intradural tumors, a single-center clinical study in Beijing, China

Most intradural tumors are located within the intradural extramedullary compartment, and the most common tumors are spinal schwannomas and meningiomas. Other less common neoplasms include neurofibroma, solitary fibrous tumor,myxopapillary ependymoma, lymphoma, metastatic leptomeningeal disease, malignant peripheral nerve sheath tumor, and paraganglioma. [1].

Spinal schwannoma is most frequently seen in the cervical and lumbar regions, far more frequently than in the thoracic spine.

The incidence of spinal schwannoma is 0.3–0.5/100,000 individuals annually [2].

Its prevalence is similar in males and females, and it is usually diagnosed during the fourth and fifth decades of life [3].

Schwannomas have an incidence of 3% of all spinal tumors.

Most occur sporadically and are solitary, but they may also be associated with Neurofibromatosis type 2, but can occur with Neurofibromatosis type 1.

Spinal schwannoma constitutes approximately 25% of the intradural spinal tumors [4] [5] [6] [7] [8] [9] [10]. [11] [12] [13] [14] [15].

Except in cases of neurofibromatosis, it is very rare for tumors of different pathological types to exist concurrently at the same spinal level, with only 9 cases reported to date, in which spinal meningioma was found with spinal schwannoma in 7 cases and with spinal neurofibroma in 2 cases [16].

Configuration

In a paraspinal location, they are the commonest cause of intradural extramedullary tumors but may also be extradural or extramedullary [17].

Most are entirely intradural, but 8-32 % may be completely extradural [18) 19)]. 1-19 % are a combination, 6-23 % are dumbbell spinal schwannomas, and 1 % are intramedullary schwannomas.

The most common location of spinal schwannomas are the lumbar spine (48%) [20)].

Schwannomas are frequently located in the extramedullary region, and may present as dumbbell shaped in 10-15% of cases. They may also be located at the intramedullary region. Ten percent of the tumors were in the extradural location, and 1% in the intradural intramedullary regional location.

Up to 2.7% of schwannomas are located in the retroperitoneal region [21)].

Most arise from the dorsal root of spinal nerve (sensory) rootlets (75%). Paraspinal schwannomas involve the dorsal nerve roots, affecting people in the fourth and fifth decades of life [22)].

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