

## Coexistence of spinal schwannoma with unusual malignant peripheral T-cell lymphoma within a lumbar spine lesion

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Dear Editor,

Concerning the central nervous system (CNS), there have been case reports of composite tumorous lesions [2]. We report an unusual case of spinal schwannoma being infiltrated with a T-cell non-Hodgkin's lymphoma (NHL) originating from a rare type of T follicular helper cells.

A 40-year-old male patient presented with sciatic pain and paraesthesia radiating into his left leg, as well as a slight weakness of the left quadriceps femoris muscle. The medical history revealed the onset of a Crohn's disease 10 years previously, treated with prednisone and azathioprine. He did not display clinical lymphoma symptoms. Magnetic resonance imaging (MRI) of the lumbar spine revealed an intradural tumor located at level L2/3, resembling spinal schwannoma (Fig. 1a, b).

A complete microsurgical resection was carried out via partial laminectomy L2 and L3. Intraoperatively the tumor originated in the L3 nerve root and showed findings unusual for schwannoma. The adjoining nerve roots were thickened, possibly by tumor infiltration, and the tumor affected six nerve roots.

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Microscopically, the biopsy tissue showed dense sheets and nests of small round lymphoid cells with hyperchromatic nuclei and scant cytoplasm intermingled with histiocyte-like cells. The cells infiltrated a spindle cell tumor with fascicular architecture of tumor cells with hyperchromatic nuclei and ill-defined cytoplasm in a fibrillary eosinophilic matrix. The tumor tissue showed a dense network of argyrophilic reticulin fibers.

The spindle cells displayed S-100 protein-immunopositivity (Fig. 1c) and only rare Ki-67-positive nuclei. Schwannoma (WHO grade I) was diagnosed.

The lymphoid infiltrates consisted predominantly of CD3-immunopositive T cells (Fig. 1d) and there were also numerous CD68-immunopositive histiocytes. The T cells showed PD-1 immunopositivity and focal Ki-67 labeling indices of 10–20%. In molecular pathology, they proved to be a clonal T-cell population. An unusual small cell peripheral T-cell lymphoma originating from T follicular helper cells was diagnosed.

Therefore, the patient showed two tumors in one mass lesion: a schwannoma (WHO grade I) and a small cell peripheral T-cell lymphoma.

Postoperatively, the patient was free of symptoms. Hemato-oncological screening revealed no second focus of NHL or any other neoplasm. The patient underwent local radiation therapy and after 20 months there is no tumor recurrence.

Spinal tumors are uncommon. Spinal schwannomas account for about 25% of intradural spinal cord tumors in adults [1]. T-cell NHLs are a very heterogeneous group of malignancies derived from mature postthymic T-cells and natural killer cells. Peripheral T-cell lymphomas account for approximately 7% of all NHL. Spinal involvement of NHL occurs in 0.1–10% of the patients with NHL as metastatic lymphoma [8]. Primary NHLs arising in the spinal cord are