

PP34

Neuroblastoma with invasion of the spine treated with laminoplasty – Report of two cases

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Introduction: Neuroblastoma is the most common extracranial solid malignancy and the most common cancer in pediatric age. Metastatic spinal cord compression (MSCC) is usually treated with urgent chemotherapy and surgical decompression, depending on age and extent of the tumour. However, the surgical treatment is still debated, especially about the opportunity to perform laminectomy of laminotomy to prevent deformities at follow-up.

Methods: We present two cases of neuroblastoma with metastatic invasion of the spine. Both patients presented with flaccid paraplegia. In case n. 1 MRI showed large tumour invading the mid-thoracic region (T2-T6), while in the second patient MRI showed retroperitoneal tumour with compression of the spinal cord at T11-L1. Both patients underwent urgent surgical decompression with hemi-laminotomy performed with drill on one side; surgical debulking was carried out until the dural sac showed good decompression and pulsation. Hemi-portion of the lamina removed was repositioned and fixed with microplates and screws.

Results: Histological examination revealed neuroblastoma. Both patients were followed with chemotherapy. Patient number 1 showed partial neurological recovery; he is now able to walk with assistance and climb stairs. Patient number 2 showed complete neurological recovery at the late follow-up. No deformities were noted at radiological follow-up.

Conclusions: Aggressive surgical and oncological treatment show good results in children with neuroblastoma of the spine. Given the young age, laminotomy with laminoplasty is the preferred approach in order to prevent deformity at follow-up, according to our experience and to international literature.