

CLINICAL CASE OF REMOVAL OF INTRADURAL SPINAL TUMOR

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Abstract: According to the statistical data of pathological examination, the frequency of detection of spinal cord tumors is 10-15% of all tumors of the central nervous system (CNS) [1,2,3]. Most often, spinal cord tumors (SCT) are observed in the socially active group of people aged 30-50 years, which determines the great relevance of this problem [2,4,5]. Tumors of the cervical spinal cord account for 19.0-36.5%, thoracic - 26.9-47.0%, lumbosacral - 23.0-33.3%, equine tail and terminal thread - 11%. The most common are extramedullary tumors 53-90% of all spinal cord tumors, the frequency of intradural intramedullary tumors is 10-30%. With the introduction of modern neuroimaging methods of research (magnetic resonance imaging, multispiral computed tomography) into neurosurgical practice, the diagnosis of spinal cord tumors has improved significantly. However, the problem of timely detection of spinal cord tumors remains relevant everywhere, which determines the results of surgical interventions [3,4,5].

Key words: tumor, spinal cord, intradural, extramedullary.

Presentation of a clinical case. Patient P. was admitted with complaints of limited movement in the lower extremities, decreased sensitivity in the lumbar region, anterior thigh, inability to hold urine, flatulence, and decreased libido. Symptoms progressed over several months. The patient's vital signs were stable. Body temperature was normal, pulse was regular, 84 beats per minute, blood pressure was 110/80 mm Hg, and respiratory rate was 16 beats per minute. Neurological status was assessed using the Frankel (D) and Mc-Cormick (grade 3) scales at admission and after treatment [6,7,8,9,10]. Magnetic resonance imaging revealed intraduralextramedullary tumor at the level of VTh12, L1-2-3-4 vertebrae(Fig. 1.).

The patient underwent a planned operation: Laminectomy at the levels of Th12, L1-2-3-4 vertebrae with total removal of the intradural extramedullary spinal cord tumor in this area.



Fig. 1. MRI data intraduralextramedullary spinal cord tumor at the level of VTh12, L1-2-3-4 vertebrae

Progress of the operation: After treating the surgical field of the thoracic and lumbar spine with alcohol and iodine, under the control of C-arm, the levels of the Th12, L1-2-3-4 vertebrae were identified. A skin incision was made along the midline with dissection of the subcutaneous fat and muscle aponeurosis. Hemostasis was performed. The spinous processes and arches of the Th12, L1-2-3-4 vertebrae were skeletonized from the paravertebral muscles using monopolar coagulation. Hemostasis is controlled. Laminectomy of the Th12, L1-2-3-4 vertebral arches to the pedicles of the arches was performed, the yellow ligament was removed. In this area, the dura mater (DMA) was tense, pulsation of the spinal cord was weakened. The next stage of the operation was performed using a neurosurgical microscope and microsurgical instruments. Hemostatic sponges (tachocomb) were placed on the lateral surfaces of the dura mater, and hemostasis of epidural bleeding was achieved.

At the levels of Th12, L1-2-3-4, the dura mater was opened with a linear incision 15 cm long. A tumor with the following characteristics was visualized in the surgical field:

- Brownish red color
- Relatively dense consistency
- With hypertrophied blood vessels

The tumor node was carefully isolated from the surrounding tissues and spinal cord roots, and its total removal was performed.

The dura mater was sutured hermetically with a continuous suture under a microscope. Bleeding was stopped using bipolar electrocoagulation, hydrogen peroxide and hemostatic materials.

A drainage from a vinyl chloride tube was left in the epidural space. The wound was sutured layer by layer, treated with alcohol and iodine, an alcohol compress and an aseptic bandage were applied.

Results: The patient's general condition in the postoperative period is satisfactory. Breathing is

even, RR 20 beats/min. Vesicular breathing is heard in the lungs. Blood pressure 110/70 mm Hg. Pulse 72 beats/min. The abdomen is soft, painless. Urination is frequent, involuntary. Consciousness is clear. There are no meningeal symptoms. General cerebral symptoms are absent. Pupils D=S, photoreaction is preserved. Neurological deficits and pelvic organ functions were preserved in the first day after the operation. Recovery of neurological deficits according to the Frankel scale from "D" to "E", according to the Mc-Cormick scale from grade 3 to grade 1.

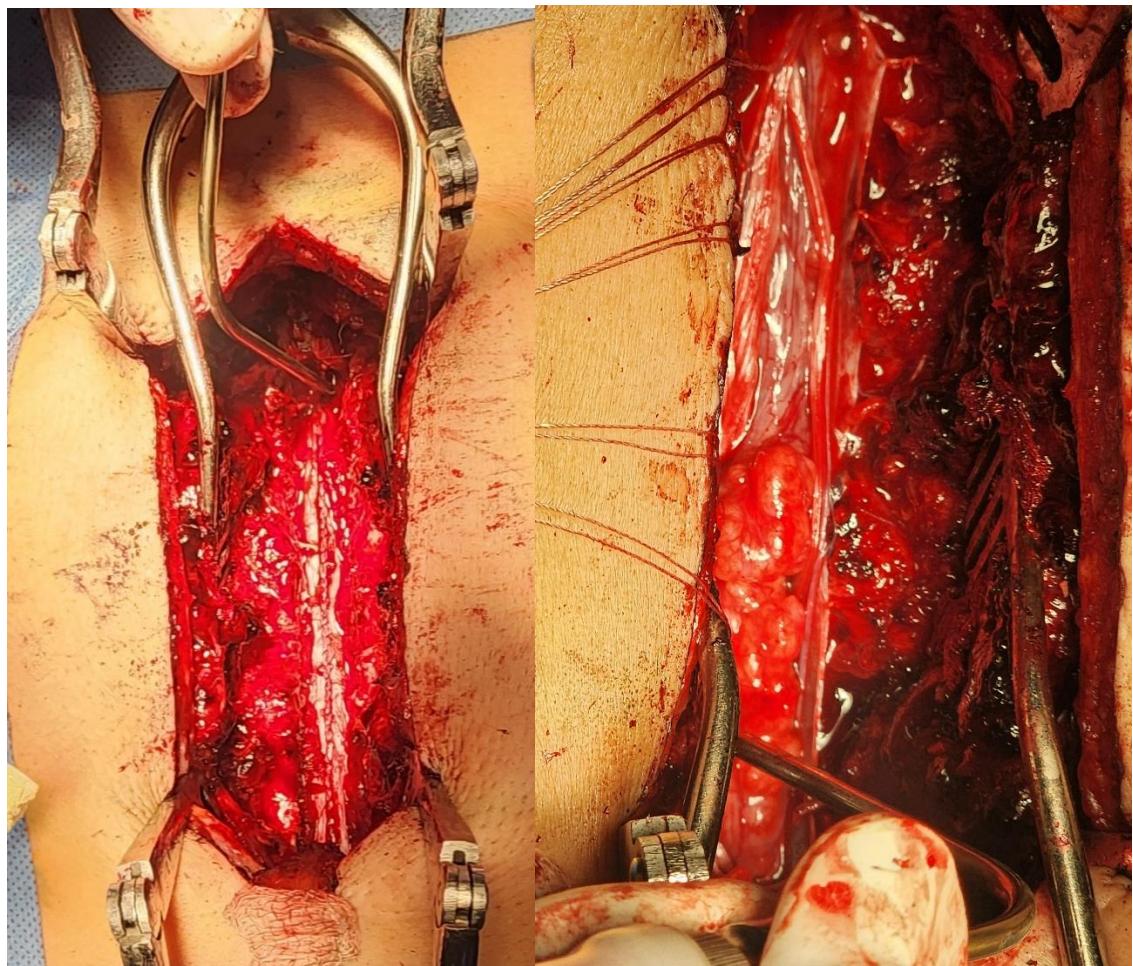




Fig. 2.Intraoperative images of tumor removal

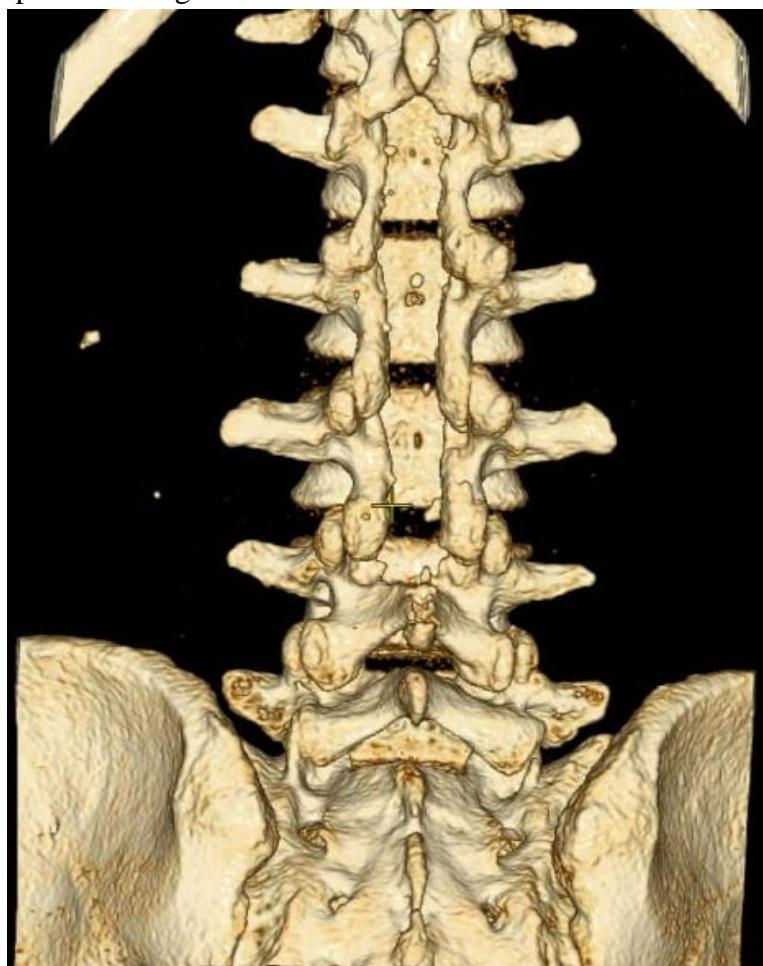


Fig. 3. MSCT. SPO removal of the spinous processes of VL.

Conclusion:In the postoperative period, the patient experienced an improvement in cerebrospinal fluid circulation in the subarachnoid space by eliminating compression by the tumor and eliminating neurological deficits.Correct diagnosis is essential to ensure the best treatment and optimal outcome. Preoperative functional status, tumor histology, and the degree of tumor

invasion determine postoperative outcomes. Therefore, timely diagnosis and surgical intervention are necessary. Late surgical interventions negatively affect neurological outcomes in the postoperative period.

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