



Figure 1. Magnetic resonance imaging of the cervical and thoracic spines demonstrating an intradural spinal cord tumor at the C3, C7-T1, and T2 levels.

The tumor shows hyperintense signal on T1-weighted images (a: sagittal, e: axial), predominantly hypointense signal on T2-weighted imaging (b, d), and enhancement on contrast-enhanced T1-weighted imaging (c).

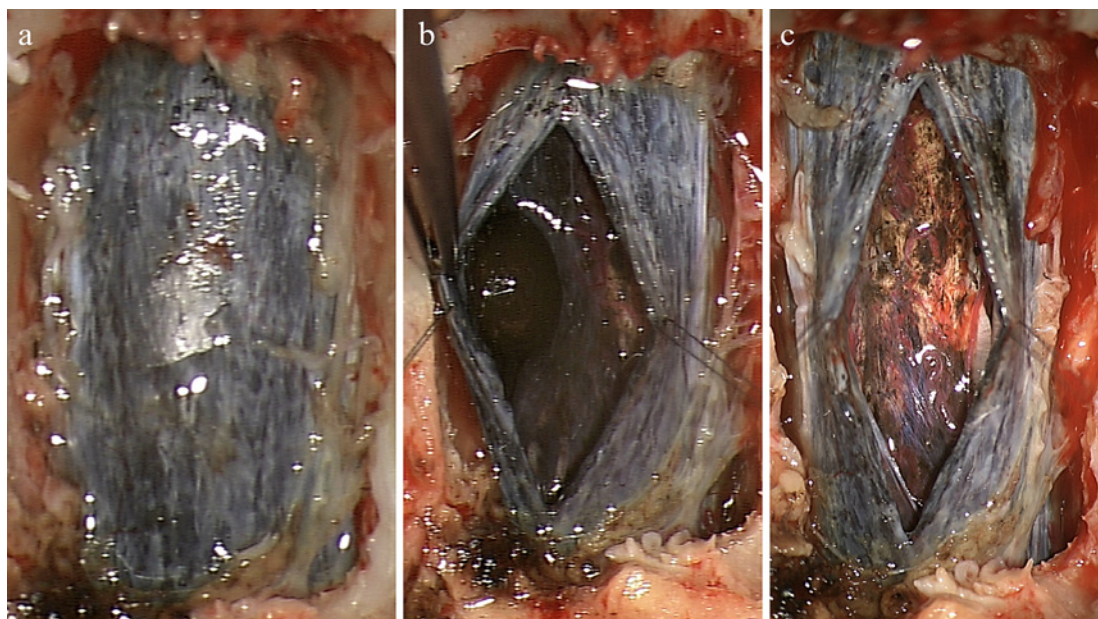


Figure 2. Intraoperative photos from the surgical microscope.

The gray dura mater is observed (a), and the black tumor is exposed after the dural incision (b). The tumor is completely removed (c).

producing cells¹⁾. The incidence of primary spinal cord melanomas is rare. Primary malignant melanomas in the central nervous system have been reported to be only 1% of all melanomas and primary spinal cord melanoma is even rarer²⁻⁴⁾; thus far, primary spinal cord melanomas have been published only as case reports²⁻⁶⁾. The majority of malignant melanomas of the spinal cord show hyperintensity on T1-weighted imaging, hypointensity on T2-weighted imaging relative to the spinal cord signal, and homogeneous en-

hancement on contrast-enhanced T1-weighted images⁷⁾. The high signal intensity on T1-weighted imaging is a typical sign of a malignant melanoma of the spinal cord and is considered to be caused by the melanin pigmentation of the hemorrhagic foci⁷⁾.

The treatment of primary spinal cord melanoma is controversial and not yet standardized. Generally, surgical resection is recommended; however, total resection of a primary spinal cord melanoma is often difficult and some patients



Figure 3. Magnetic resonance imaging of the thoracic spine demonstrating an intradural spinal cord tumor at the T10-11 level. The tumor shows hyperintense signal on T1-weighted images (a: sagittal, d: axial), hypointense signal on T2-weighted imaging (b), and enhancement on contrast-enhanced T1-weighted imaging (c).

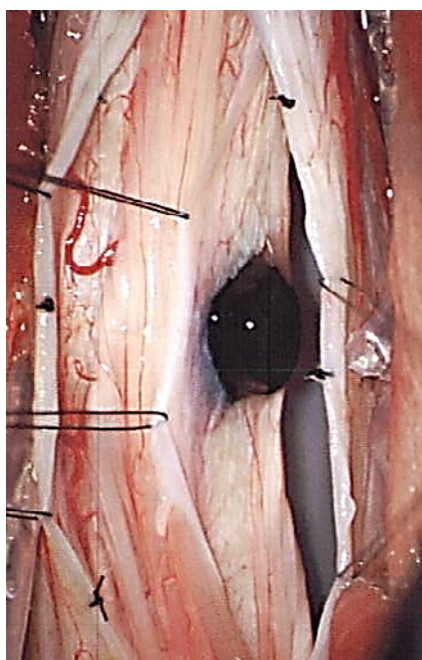


Figure 4. Intraoperative photos from the surgical microscope. After the dural incision, the black tumor is exposed at the posterolateral to the spinal cord.

will require postoperative adjuvant treatment, such as radio and chemotherapy⁸). Radiotherapy can be used as an effective adjuvant treatment for primary spinal cord melanoma⁹). Although adjuvant radiation therapy has been used in some reports, the ideal target dose has not been established and it is unclear whether the irradiation should be performed locally or on the whole brain and spinal cord due to the lack of robust data⁸). In our two cases, total resection of the spi-

nal cord tumors was performed and the patients were treated with local irradiation. The optimal treatment for primary spinal cord melanoma should be determined depending on the patients conditions. After the surgery, positron emission tomography-CT and brain MRI as well as blood examination are useful tools for screening of metastasis of the primary malignant melanoma.

The prognosis for primary spinal cord melanoma is unpredictable due of the rarity of the tumor. The prognosis of patients with primary melanoma in the central nervous system has been shown to be superior to that of patients with metastatic lesions¹⁰). It has been reported that the average survival period of patients with skin melanoma with metastases to the central nervous system is <1 year, and that the average life-span of patients with a primary central nervous system melanoma after treatment is 7 years¹¹). For better prognosis of this tumor, early diagnosis and appropriate treatment is mandatory. The presence of primary spinal cord melanoma should be considered in the treatment of spinal cord tumors.

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Ethical Approval: Unnecessary

Informed Consent: Informed consent was obtained from the patients for publication of this case report and any accompanying images.

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