Intramedullary Spinal Cord Metastasis
- Report of Two Cases and a Review of the Literature -

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Background The intramedullary spinal cord metastasis (IMSCM) accounts for only 3.4% of symptomatic metastases to the spinal cord. The survival of the patient with IMSCM is short, often under 2 months, due to rapid neurologic deterioration and to the presence of widespread metastases including those to the brain. Three mechanisms have been suggested; 1) via direct arterial seeding, 2) via vertebral venous system, 3) by direct extension from nerve roots or cerebrospinal fluid. We experienced two cases of IMSCM whose survival differed each other.

Case 1 A 64-year-old man was diagnosed as the undifferentiated carcinoma of the sphenoid sinus and treated with radiotherapy (RT) to the tumor mass. He improved after RT. At 22 months after initial diagnosis, he felt knee joint pain and low back pain radiating to left leg. Three month later, he felt severe pain radiating to both legs for a week, and then rapidly progressive upper back pain, paraparesis, painful urinary retention for 3 days. Magnetic resonance imaging (MRI) of the thoracic spine showed intramedullary spinal cord mass at T3 and T4 level with accompanying syringomyelia. He was treated with steroid and palliative RT (40 Gy/ 20 fractions to C7-T7 spine level). The voiding difficulty disappeared after 10 Gy, and paraparesis improved progressively. He could walk with a cane after RT. He died of disease at 26 months after the radiotherapy to the spine due to IMSCM.

Case 2 A 69-year-old man was diagnosed as squamous cell carcinoma of the lung and was treated by RT. The patient complained of blurred vision and impaired memory at the end of thoracic RT, and then left hemiparesis suddenly developed. The computerized axial tomography of the brain showed the hemorrhagic metastases. Two days later, the paraparesis developed newly with sensory impairment and inability of self voiding and defecation. The MRI with Gadolinium-enhancement revealed the intradural intramedullary mass lesion of the spinal cord at the level of T12 with dense enhancement. The tremor of both lower extremities developed one week after paraparesis. The RT (18 Gy/ 9 fractions) on the T11-L1 spine area was done. The tremor was not controlled and made him very difficult. RT was interrupted. He died of disease at 1 months after the diagnosis of IMSCM.