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Slowly progressive solitary plasmacytoma of the thoracic spine

Longbing Ma, MD, Tingxian Ling, MM, Tao Li, MD, Yueming Song, MD, PhD

Affiliation:

Department of Orthopedic Surgery, West China Hospital, Sichuan University, China.

First author:

Longbing Ma, MD, E-mail: malongbing11@163.com

Corresponding author:

Tao Li, MD
Address: Department of Orthopedic Surgery, West China Hospital,
Sichuan University, No. 37 GuoXue Road, Chengdu, Sichuan 610041, China
E-Mail: litao_hx@163.com
Tel: +8602885422573.

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Eight years prior to admission, a 40-year-old female was referred to a local hospital for back pain. CT showed an osteolytic lesion with an ossified rim in the body of T11. MRI showed an irregular, heterogeneous mass in the same vertebra. Further work-up and therapy were refused by the patient at that time. She did return for 3-year and 8-year follow-ups. CT and MRI revealed continuous slow progression of the tumor（Figure 1）. PET/CT revealed 18FDG uptake confined to the tumor with an SUVmax of 5.7（Figure 2）. There were no other foci of abnormal uptake in the rest of the body. Hematology revealed no M-protein and urinalysis revealed no light chain protein. Bone marrow cytology and pathology revealed no obvious abnormality. Tumor excision was performed using an anterior approach, followed by interbody fusion and titanium rod instrumentation （Figure3）. Solitary plasmacytoma was diagnosed based on pathological examination and immunohistochemical staining.

Solitary bone plasmacytoma (SBP) involving a vertebra is very rare and has a high risk for progression to multiple myeloma. Despite the propensity of SBP to progress to multiple myeloma in 2–3 years[1], her disease remained confined to T11 for 8 years prior to tumor excision.

Device Status/Drug Statement:

The Manuscript submitted does not contain information about medical device(s)/drug(s).

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References:

[1] Y.Suh, C. Suh, J.S. Kim, S. Kim, H.O. Pyun, J. Cho, Radiotherapy for solitary plasmacytoma of bone and soft tissue. Ann Hematol. 91 (2012) 1785–1793.

Figure legends

Figure 1. 3D-CT and MRI of the tumor. (A) 8 years before presentation to our hospital. (B) 5 years before presentation to our hospital. (C) 3 months before presentation to our hospital. These images display the lesion's slow progression.

Figure 2. PET-CT 3-months before presentation to our hospital show 18FDG uptake in the lower thoracic spine in the area of osteolysis.

Figure 3. Frontal (A) and lateral (B) X ray and CT images 1 month after tumor excision and interbody fusion.