SOLITARY SPINAL EXTRADURAL PLASMACYTOMA: A CASE REPORT

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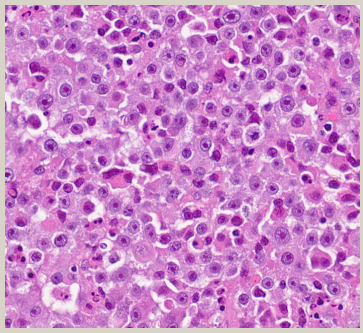
Introduction

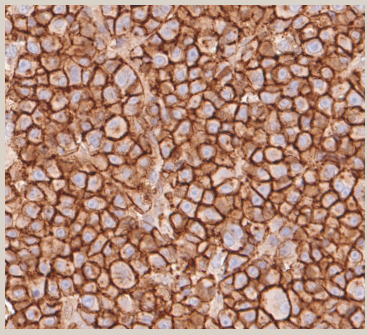
It is exceedingly rare for plasma cell neoplasm to present as solitary extradural plasmacytoma with only 10 case reports in literature. Here we report a rare case of solitary extradural plasmacytoma presented with bilateral lower limbs weakness.

Case Report

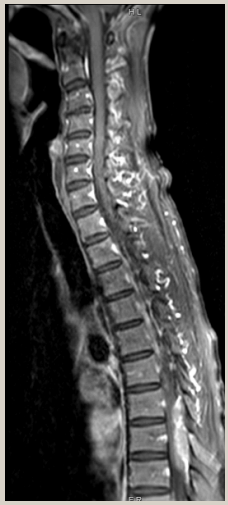
An 83-year-old man complained of bilateral lower limbs weakness with unremarkable physical examination. Blood tests were unremarkable on admission. He developed acute retention of urine and reduced lower limbs power 3 days afterwards. MRI thoracic spine reviewed a T7-T9 extradural spinal tumour. Emergency operation of T7 to T9 laminectomy and spinal tumour excision was done. Pathology of the tumour was plasma cell neoplasm. PET-CT showed no distant metastasis. He had 6% of clonal plasma cell in bone marrow examination and was considered as a case of solitary extramedullary plasmacytoma with minimal marrow involvement. He is now receiving palliative radiotherapy and thalidomide with multidisciplinary input from the medical and oncology colleagues. Unfortunately, his lower limb power remains 3/5 and he does not regain bladder function.



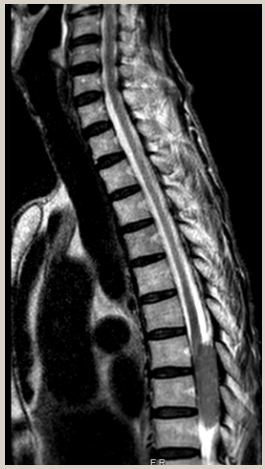
- H&E section showing atypical plasma cells with marked nuclear pleomorphism, prominent nucleoli and mitotic figures



- The atypical cells are diffusely positive for CD138 immunostain which is a marker for plasma cells



- MRI Spine T1 showing epidural mass at T7-T9 level with contrast enhancement



- MRI Spine T2 showing a slightly hyperintense signal

Discussion

Patients with plasma cell neoplasia can present with generalized disease in form of multiple myeloma, solitary bone plasmacytoma and even more rarely solidary extramedullary plasmacytoma [1].

The diagnostic criteria of solitary extramedullary plasmacytoma includes biopsy proven extramedullary tumour with clonal plasma cell, normal bone marrow with no evidence of clonal cell, no other lytic lesion in PET-CT scan and lack of end organ damage such as hypercalcemia, anemia, renal deficiency [2]. In our patient, he had 6% of clonal plasma cell in bone marrow examination. He was considered as a case of solitary extramedullary plasmacytoma with minimal marrow involvement. These patients are treated in the same manner with solitary extramedullary plasmacytoma, but they have higher risk of progressing to multiple myeloma [3].

In the spine, it is more common for plasma cell neoplasm to present as destructive osteolytic bone lesion causing spinal cord and nerve root compression [4]. Instead of the conventional presentation, our case is a case of solitary extradural plasmacytoma without surrounding bony involvement.

Solitary extradural plasmacytomas usually present as well defined lesions located in the extradural dorsal spinal canal without bone erosion and paraspinal exophytic mass [5]. They have variable MRI features which can make pre-operative diagnosis difficult.

Solitary extramedullary plasmacytoma is usually treated with surgery and radiotherapy, while the use of adjuvant chemotherapy remains controversial. The role of adjuvant chemotherapy is controversial as results varies in different studies [2]. In our case, radiotherapy and the immunomodulating agent of thalidomide was used with the expert opinion of hematologist.

Regarding the 6 patients in the literature presented with neurological deficits, only half of them showed neurological improvement after treatment. Survival was at least 5 months. [6]

Conclusion

Extradural plasmacytoma is one of the differential diagnosis of spinal extrdural tumour. The incidence is very rare.

References

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