

## **Abstract**

### **Introduction**

Polyneuropathy is a key feature of POEMS (Polyneuropathy Organomegaly Endocrinopathy Monoclonal band and Skin changes) syndrome, which is a paraneoplastic manifestation of an underlying lymphoproliferative neoplasm. We report the first case of POEMS syndrome presenting with a pseudosensory level.

### **Case presentation**

A 59-year-old woman, with long standing diabetes mellitus and hypertension developed with painless, progressive inguinal lymphadenopathy. A contrast-enhanced CT showed mild hepatomegaly and intra-abdominal lymphadenopathy. Histological examination of an enlarged inguinal lymph node showed features of a plasma cell-type Castleman disease. She was treated with rituximab. Six months later, she developed gradually ascending numbness and weakness of both lower limbs. On examination, she had flaccid paraparesis (power 3/5) with a sensory level to pin-prick at thoracic level 9 (T9). Joint position sense was preserved. Her cranial nerves and upper limbs were neurologically normal. Nerve conduction studies confirmed peripheral neuropathy with conduction slowing and an MRI of the spine did not show cord or root compression. Serum protein electrophoresis showed a monoclonal band. Bone marrow biopsy showed a hypercellular marrow with 30% plasma cells. A repeat contrast-enhanced CT showed sclerotic bony lesions involving multiple vertebrae in addition to mild hepatomegaly and intra-abdominal lymphadenopathy. POEMS syndrome was diagnosed and she was treated with intravenous pulse therapy of dexamethasone and cyclophosphamide. After three cycles of treatment, she regained normal muscle power and sensation.

### **Conclusions**

Polyneuropathy in POEMS syndrome can present as a pseudosensory level.