

BILATERAL ABDUCENS NERVE PALSY ASSOCIATED WITH HYPERVISCOSITY OF THE SERUM IN A PATIENT WITH MULTIPLE MYELOMA

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Neurological manifestation often complicates the course of patients with multiple myeloma (MM). We describe a case of bilateral abducens nerve palsy in a patient with MM without evidence of direct infiltration or compression of the nerves. A 80-year-old woman presented with generalized weakness and weight loss. The bone marrow examination revealed hypercellular bone marrow with diffuse infiltration by atypical plasma cells accounting for 37% of all cells. The serum immunological examination demonstrated elevated IgG and monoclonal κ -light chain M protein. The patient was diagnosed with IgG κ type MM. One month later, the patient presented with dizziness and horizontal diplopia. Neurological examination revealed bilateral abducens nerve palsy. The brain MRI showed no abnormality. CSF examination demonstrated acellular fluid with normal level of protein and glucose. She was put on a combination of chemotherapy and steroid and the bilateral rectus weakness had been improved slowly over the next two weeks. CNS involvement manifesting as cranial nerve palsy in MM is extremely rare. There have been several case reports about sixth nerve palsy in MM affected by compression of intracranial mass lesion on skull base and cavernous sinus, direct infiltration, or meningeal metastases. In this case, there was no evidence for that kind of involvement and the occurrence of the neurological deficit was bilateral and simultaneous. We think that hyperviscosity of the serum in MM might cause the ischemic demyelination of a portion of abducens nerves and this should be included as one of the possible mechanism.