Godtfredsen syndrome: an unusual initial presentation of multiple myeloma with intracranial plasmacytoma

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ABSTRACT

Godtfredsen syndrome, is a syndrome of abducens nerve (cranial nerve CN VI) and hypoglossal nerve (cranial nerve CN XII) palsy that localise to a clival lesion. Multiple myeloma (MM) and plasmacytoma are rarely one of its causes. A 56-year-old man with no known comorbidities, presented with binocular diplopia, loss of weight and appetite for two weeks. Examination showed failure of left eye abduction and deviation of tongue towards left side upon protrusion, without Horner's syndrome, meningism, or other neurological deficits. This showed isolated left CN VI and XII palsy. Blood tests depicted cytopenia (anaemia and thrombocytopenia), acute kidney injury and hypercalcemia. Computed tomography (CT) brain contrast showed multiple lytic lesions with solid components of plasmacytoma at the clivus, left basisphenoid, basioccipital, and occipital bone. The plasmacytoma extended laterally to infiltrate the left cavernous sinus. Bone marrow biopsy and serum protein electrophoresis confirmed IgG kappa multiple myeloma. Clivus is a part of the occipital bone at the skull base, which is formed by sphenoid body and basiocciput, joined at the spheno-occipital synchondrosis. Abducens nerve and hypoglossal nerve are positioned medially on the clivus, which makes them susceptible to lesion at midline clivus while sparing other cranial nerves. The plasmacytoma extended into left cavernous sinus, potentially contributing to abducens palsy. Magnetic resonance imaging of brain is the preferred method to evaluate lesions and affected cranial nerves, but it was not performed due to resource constraints.