Mark Podberezin, J Clin Exp Pathol 2017, 7:2 (Suppl)
DOI: 10.4172/2161-0681-C1-034

Multiple myeloma with plasmablastic morphology and central nervous system (CNS) involvement

Mark Podberezin
University of Saskatchewan, Canada

We describe an unusual case of multiple myeloma (MM) with plasmablastic morphology in a young man who, after chemotherapy and autologous stem cell transplant, developed disease recurrence with isolated CNS involvement. Plasmablastic type is characterized by immature cells with round nuclei, prominent central nucleoli, and amount of cytoplasm much smaller than that in mature plasma cell. According to different studies, plasmablastic MM may account for 15-30% of MM cases and tend to be associated with adverse prognosis. It has been shown to correlate with high proliferation rate, extensive bone marrow infiltration, but not with high risk chromosomal aberrations. Despite the fact that plasmablastic morphology is not uncommon in MM patients, CNS involvement in this disease is very rare. Overall, extramedullary involvement is found in 7% of patients with MM upon initial diagnosis, with CNS involvement occurring in less than 1% of patients. Based on Mayo Clinic study of 4060 MM patients, only 0.7% of all patients had CNS disease. MRI studies demonstrate that predominant pattern of CNS myelomatous disease is leptomeningeal involvement, with intraparenchymal tumor-like lesions being much less common. In some patients, dural involvement and/or direct extension of MM into CNS were described. In 82% of patients with CNS myelomatosis, neoplastic plasma cells were found in CSF, and in those without CSF involvement, the diagnosis was made by MRI which detected either leptomeningeal or intraparenchymal involvement. It is worth to mention that CNS involvement in MM tends to occur in younger patients, without evidence of advanced disease, sometime with isolated CNS involvement. In many of these patients, complete remission can be achieved with the use of systemic, rather than intrathecal, chemotherapy, particularly with addition of novel agents such as Bortezomib (proteasome inhibitor) and Lenalidomide (immunomodulatory agent). Diagnostic approach, as well as management of patients with CNS involvement by MM, will be discussed.

Biography

Mark Podberezin completed his Medical School (MD) Degree in Russia where he practiced Clinical Hematology before moving to USA. He performed his PhD project in Immunohematology in United Kingdom. After moving to USA, he completed his Anatomic and Clinical Pathology Residency, as well as Surgical Pathology Fellowship training at University of Illinois at Chicago/Cook County Hospital and later completed Hematopathology Fellowship at Texas Methodist Hospital in Houston. Currently, he is Anatomic Pathologist/Hematopathologist and Assistant Clinical Professor at University of Saskatchewan, Canada.

mark.podberezin@saskatoonhealthregion.ca

Notes: