

Leptomeningeal metastasis of multiple myeloma

Metástases leptomeníngeas de mieloma múltiplo

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A 65-year-old female with multiple myeloma diagnosed one year before developed tonic-clonic seizures. She had a good initial response to chemotherapy. Brain magnetic resonance imaging (MRI; Figure 1) and cerebrospinal fluid (CSF; Figure 2) analysis showed central nervous system myelomatous infiltration. Intrathecal chemotherapy and dexamethasone were prescribed and a follow-up CSF sample was negative for plasmocytes. Neurologic manifestations of multiple myeloma are not uncommon and include spinal compression and peripheral neuropathy¹. Central nervous system myelomatosis, on the other hand, is rare. The workup for the diagnosis includes brain MRI and CSF analysis. CSF cytology has a sensitivity of 50–60% and a specificity over 95%². Prognosis is poor.

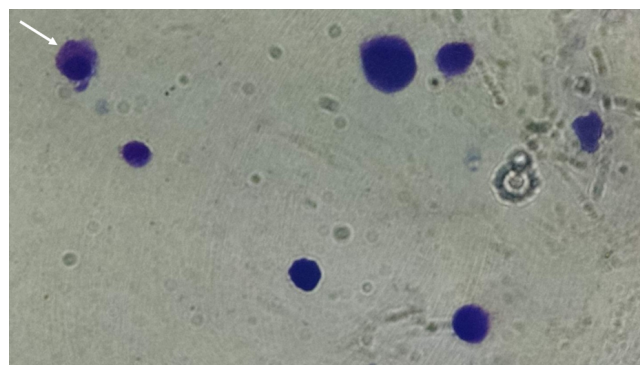


Figure 2. Cerebrospinal fluid specimen with myelomatous cells (arrow). The stain employed was May-Grunwald-Giemsa. Atypical plasmocytes found in the cerebrospinal fluid were subsequently confirmed by immunophenotyping.

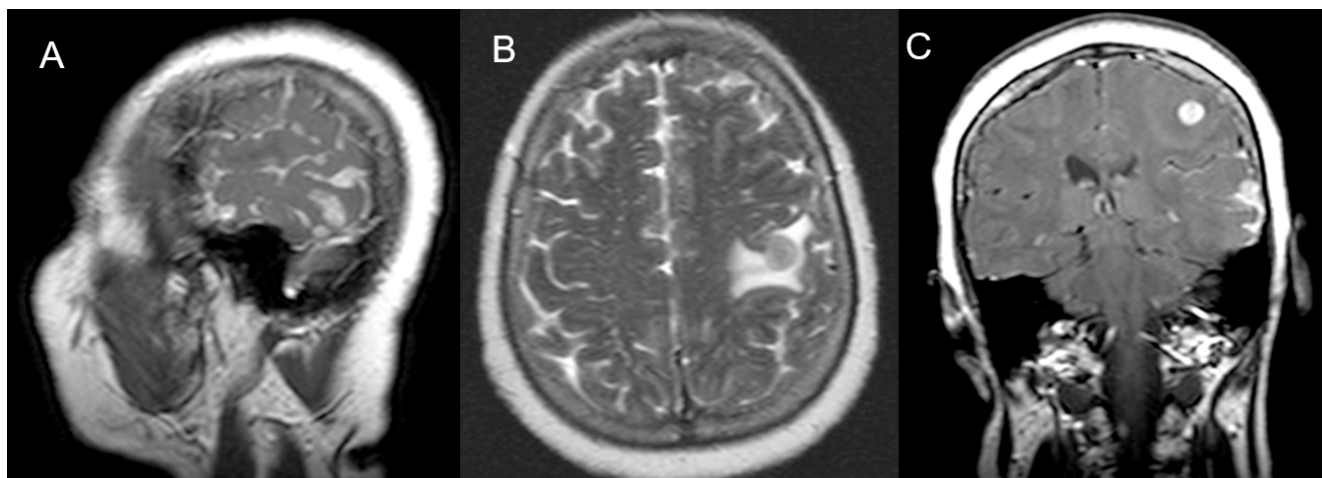


Figure 1. Sagittal postcontrast T1-weighted image (1A) shows mixed pachymeningeal and leptomeningeal thickening forming nodules and intense gadolinium enhancement. Axial T2-weighted image (1B) and coronal T1-weighted image (1C) show one of these nodules extending into adjacent brain parenchyma with perilesional edema.

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References

1. Brum M, António AS, Guerreiro R. Myelomatous meningitis: a rare neurological involvement in complete remission of multiple myeloma. *J Neurol Sci*. 2014 May;340(1-2):241-2. <https://doi.org/10.1016/j.jns.2014.03.015>
2. Bommer M, Kull M, Teleanu V, Schwarzwälder P, Feuring-Buske M, Kroenke J, et al. Leptomeningeal myelomatosis: A rare but devastating manifestation of multiple myeloma diagnosed using cytology, flow cytometry, and fluorescent in situ hybridization. *Acta Haematol*. 2018 Aug;139(4):247-54. <https://doi.org/10.1159/000489484>