

Recurrent Mollaret's meningitis: a rare disease not to be missed

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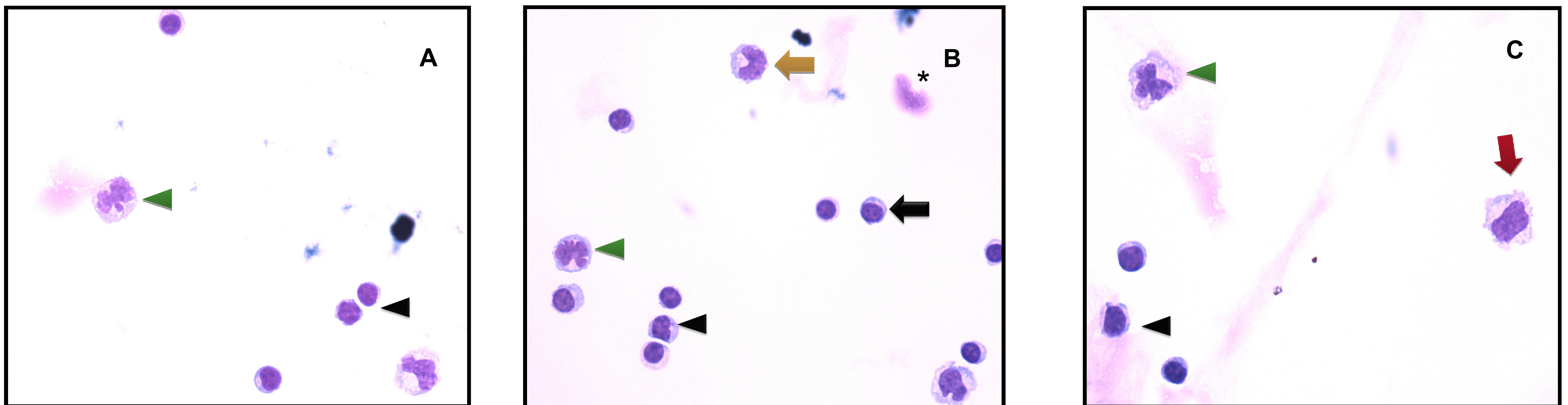


Background

Mollaret's meningitis is a rare and under appreciated syndrome of benign, recurrent aseptic meningitis. The disease is characterized by recurrent (at least three episodes), benign (no long-term sequelae) and brief (2–5 day) aseptic lymphocytic meningitis episodes, alternating with symptom-free intervals. The available literature indicates that the causative agent of Mollaret's meningitis is herpes simplex virus type 2 (HSV-2) in the majority of cases and much less frequently herpes simplex virus type 1 (HSV-1). The disease is usually self-limited and antiviral therapy is routinely not recommended. Results of CSF studies show hypercellularity and predominantly lymphocytic pleocytosis with positive HSV1 or HSV2 DNA by PCR assay. Cellular cytomorphological features of CSF characteristically show diagnostic Mollaret's cells, which are multiple activated large monocytes with deep nuclear clefts giving rise to various convoluted, eye-catching shapes of nuclei, such as cloverleaf, bean, and footprint patterns. Degenerated monocytes known as ghost cells are present.

Case Report

A 79-year-old Italian woman presented with a two day-history of fever, headache, nausea and vomiting. She presented, 18 and 10 years before, two episodes of viral meningitis. Neurological examination confirmed meningism without focal neurological deficits. CSF data showed protein levels of 35 mg/dL, normal glucose and cells. CSF Gram stain and cultures were negative. Diff-Quik stain of CSF showed many large activated monocytes with several deep nuclear clefts visible as so-called cloverleaf nucleus, footprint-shaped nucleus, and bean-shaped nucleus, with a background of normal monocytes and lymphocytes. These features were compatible with pattern described in Mollaret's meningitis. Large degenerated monocytes were present as ghost cells. CSF study by PCR assay for herpes simplex virus type 1 (HSV1) and type 2 (HSV2) were negative. The patient was discharged without antimicrobial therapy and she recovered completely.



Figures: CSF cytomorphological image of large monocytes with variable shapes of nuclei (Mollaret's cells) ghost cells, normal monocytes and normal lymphocytes

Green arrowhead=cloverleaf nucleus. Black arrowhead=normal monocytes. Black arrow=normal lymphocytes. Red arrow=footprint-shaped nucleus. Yellow arrow=bean-shaped nucleus. *=ghost cells.

Discussion

Although rare, Mollaret's meningitis can occur in adult immune-competent patient. Recognition of Mollaret's cells in the CSF is crucial for a timely and accurate diagnosis because it could prevent extensive and costly diagnostic studies and antimicrobial therapies.

References:

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