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CSF pleocytosis is an important factor in confirming a diagnosis of meningitis. However, its absence can present a diagnostic challenge for clinicians when meningitis is suspected, especially in cases of tuberculous meningitis in immunocompetent patients.

Report a case of tuberculous meningitis in a patient with no history of immunosuppression, in the absence of CSF pleocytosis.

A 27-year-old patient with no significant medical history presented with meningeal syndrome, which included headaches, vomiting, photophobia and diplopia. The patient had a fever of 39°C, a productive cough with whitish sputum, night sweats, and experienced weight loss over the past 15 days.

- **Neurological assessment:** Meningeal rigidity, along with positive Kernig and Brudzinski signs, and convergent strabismus.

- **Imaging:** Brain MRI revealed multiple supratentorial and subtentorial intra-axial lesions measuring less than one centimeter.

• Bacteriology assessment: Cytological and bacteriological examination of CSF: white blood cell counts < 3 cells/mm³, high albumin levels: 2.54 g/L, low glucose levels: 0.08 g/L. Molecular PCR testing of the CSF isolated Mycobacterium tuberculosis DNA without rifampicin resistance. Genexpert (molecular testing) of the sputum: presence of M. tuberculosis DNA without rifampicin resistance, indicating pulmonary tuberculosis.

- **Biology assessment:** White blood cell count of 8800/mm³ with lymphopenia of 1360/mm³, platelets 453.000/mm³, and C-reactive protein 17.4 mg/L.

• Immunology assessment: HIV-1 and 2 serology, anti-DNA and anti-nuclear antibodies negative, and serum protein electrophoresis did not reveal polyclonal hypergammaglobulinemia.

Cytological, bacteriological, and chemical examination of CSF is crucial for early diagnosis of tuberculous meningitis, characterised by lymphocytic pleocytosis, high protein levels, and low glucose levels. Meningitis without pleocytosis is quite common in severely immunocompromised HIV-infected patients with CD4 counts of less than 50 cells/ml who have confirmed tuberculous meningitis and also in HIV-positive patients with cryptococcal meningitis. Tuberculous meningitis without increased white blood cells in the cerebrospinal fluid has been observed in non-immunocompromised individuals but is rarely reported in Morocco and Africa. Disseminated tuberculosis and tuberculous miliaria occur less frequently in immunocompetent individuals compared to patients with HIV and low CD4 counts. Tuberculous sacroiliitis is less common, accounting for only 10% of cases of osteoarticular tuberculosis.

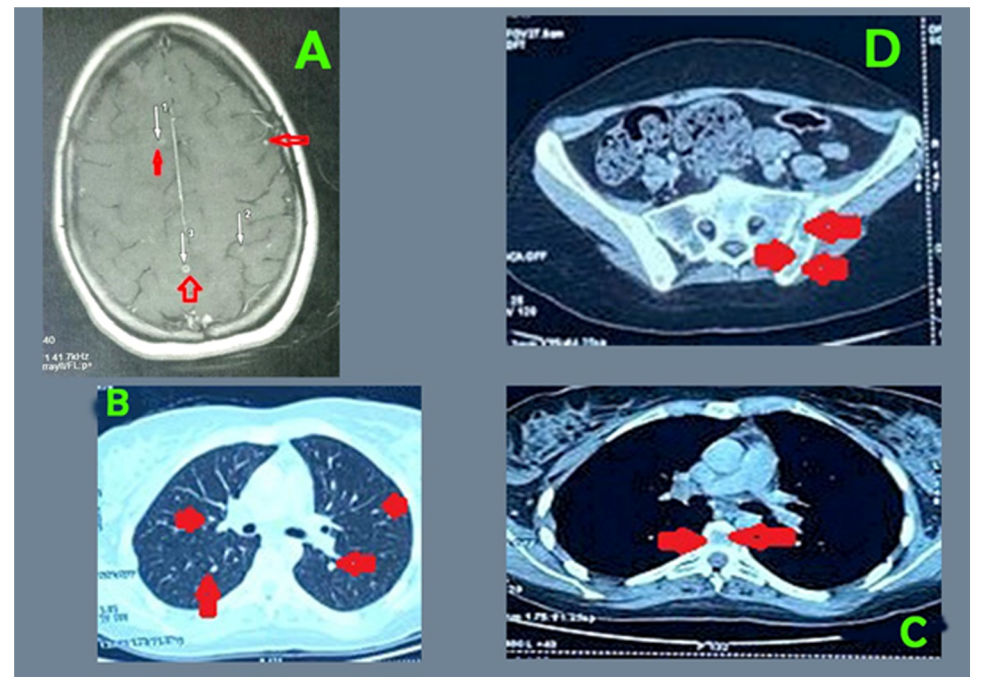


Figure 1: A. The brain MRI revealed multiple intra-axial supratentorial infra-centimetric lesions; B. An injected chest CT scan showed symmetrical micronodular opacities in both lungs resembling millet seeds; C. A CT scan of the thorax

The lack of CSF pleocytosis in tuberculous meningitis should not rule out this diagnosis in immunocompetent patients.

The authors have no competing interests to declare

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