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Letter to the Editor

Tuberculous Meningitis/Encephalitis Requires Comprehensive Laboratory and Imaging Tests and Screening of Contact Persons

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Letter to the Editor

We read with interest the article by Majambere *et al*. on a retrospective, single-center study of 90 patients with tuberculous meningitis or meningoencephalitis (TM, TME) [1]. The main risk factors for TM/TME were low socioeconomic status and recent contact with tuberculosis (TB), while the predominant clinical symptoms were fever, headache, and neck stiffness [1]. Löwenstein culture was positive in 85% of cases, and RT-PCR, which was performed in 17.7% of cases, was positive in 87% [1]. The outcome was complete recovery in 62.5%, death in 10%, and neurological deficits in 7.8% [1]. Delayed diagnosis, hydrocephalus, and TME were associated with mortality or neurological sequelae [1]. The study is noteworthy, but some points should be discussed.

The first point is that it is unclear why only 18% underwent RT-PCR for the diagnosis of TB [1]. Was the test unavailable for the remaining patients, did the patients have to pay for the test themselves, or had TB already been diagnosed by other tests? RT-PCR should be preferred over other tests because its sensitivity and specificity are higher than those of other tests [2]. Was the serum or cerebrospinal fluid tested using RT-PCR?

The second point is that TM/TME can be complicated by vasculitis of the intracerebral arteries [3]. Were the patients subjected to MR angiography (MRA) with contrast medium or digital subtraction angiography (DSA) to ultimately determine vasculitis? The detection of vasculitis in TM/TME is crucial, as it can determine the outcome and requires treatment in addition to antituberculosis drugs. What type of imaging was performed on the included patients?

The third point is that the risk factor "recent TB contact" was only identified in 13% of cases [1]. Since TB often goes undiagnosed and many infected individuals are out in public without specific treatment, it is conceivable that far more than just 13% of patients were infected through close contact with patients with asymptomatic and undiagnosed TB. We should therefore know whether relatives and work colleagues of the 90 patients included in the study were systematically tested for subclinical TB and in how many cases the results indicated TB.

The fourth point is that TM/TME can also be associated with spinal arachnoiditis [4]. How many patients had clinical or MRI-detectable involvement of the spinal cord?

The fifth point is that the number of patients with drug-resistant TB was not reported [1]. Since TB bacterium becomes increasingly drug-resistant in several regions world-wide [5], we should know in how many of the cases standard TB therapy was ineffective. Particularly in patients with poor outcome it should be clarified whether this was due to ineffectivity (drug-resistance), delayed diagnosis of TB, or due to other causes.

The sixth point is that it was not specified how many patients developed TM/TME after starting treatment for pulmonary tuberculosis. The occurrence of TM/TME after starting treatment for pulmonary tuberculosis could be an indicator of an inadequate response to antituberculosis drugs.

Overall, patients with/without pulmonary tuberculosis and suspected TM/TME should undergo comprehensive MRI and MRA examinations with contrast medium of the brain and spinal cord in order not to overlook involvement of the CNS, including the spinal cord, in TB. If TB with/without TM/TME does not respond adequately to antituberculosis drugs, drug resistance should be considered and therapy adjusted accordingly.

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