Commentary

It is not uncommon to encounter tuberculous infection of central nervous system (CNS) in developing countries. Majority of these cases are either tuberculous meningitis or tuberculoma. Tuberculous brain abscess (TBA) is a rare

complication of CNS tuberculosis. In CNS tuberculosis, an abscess represents one end of the spectrum of inflammatory reaction. It is presumed that TBA reflects a relative immune-deficient status of the host, as it is more often found in patient with AIDS.[1] However all the manifestation of CNS tuberculosis; meningitis, tuberculoma, and abscess are reported in the same patient irrespective of immune status.[2,3] Inoculation of a small number of bacilli leads to tuberculoma formation, and inoculation of a large number of bacilli in the same individual may lead to an exaggerated exudative phase of pathology with extensive caseation leading to abscess. This massive inflammation explains presence of polymorphonuclear cells and persistence of ill-formed epitheloid granulomas with/without multinucleated giant cells in the wall of a true TBA.

TBA needs to be differentiated for cystic tuberculoma, in which there is lack of cellular infiltration during liquefaction of the necrotic center. Other condition which mimics TBA closely is softened caseous center of a tuberculoma. Tuberculomas having macroscopic purulent foci are not uncommon. They should not been termed TBA, as they have a sparse mycobacterial load.[4]

The authors report four cases of microbiologically and pathologically confirmed cases of TBA. They have worked up the cases well and came to a conclusive diagnosis.

An MRS study of the pus was also done and demonstrated a different spectrum of tuberculous abscess from pyogenic abscess, which has been reported earlier.[5] The mycobacteria are predominantly composed of lipids. There is a relative lack of proteolytic enzymes in the tuberculous inflammatory exudates compared with pyogenic inflammation. The nonvisibility of the amino acids at 0.9 ppm in tuberculous abscesses probably stems from the presence of large amounts of mycobacteria and the lack of proteolytic enzymes, resulting in poor degradation of the proteins into amino acids. MRS is an important diagnostic tool to differentiate various pathologies in brain but it cannot replace microbiological examination of pus for the purpose of treatment. The diagnosis of any abscess irrespective of etiology should be based only on microbiological and/ or histopathological examination. Microbiological examination is mandatory as it will guide the definite treatment, which is variable upon the organisms isolated.[5]

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How to cite this article: Shukla D. Commentary. J Neurosci Rural Pract 2011;2:157-8.

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