

Case Reports

Central Nervous System Aspergillosis

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Fungal infections of the human central nervous system have been diagnosed since the turn of the century. They are generally being recognized more frequently due to increased awareness of clinicians as well as pathologists and microbiologists. Improved staining techniques and increased use of therapeutic agents which alter patients immune mechanisms have contributed to increased diagnosis(1). Although CNS mycosis are less common than other microbial CNS infections like bacterial meningitis and viral infections, it is essential that they are promptly recognized and adequately treated. An interesting case of CNS aspergillosis is presented here, to emphasize this point.

Case Report

A 13-year-old boy was diagnosed to have steroid responsive nephrotic syndrome 6 weeks prior to admission. At the time of admission he was on prednisolone. He presented with high grade intermittent fever and progressive weakness of right upper and lower limbs of 3 days duration. There was no history of ear discharge, loss of consciousness,

convulsions or loss of speech. On examination, he was alert and conscious, was mildly febrile and vital signs were stable. He had right sided hemiparesis, clinically suggestive of a left supratentorial space occupying lesions. Other systemic examination was normal. A CT Scan was performed which showed ring enhancement in both parietal lobes, mainly in the left side suggestive of multiple abscesses. An aspiration biopsy of the abscess was done under CT scan guidance and the material was sent to the National Institute of Mental Health and Neuroscience, Bangalore, for neurohistopathological examination. The material submitted showed necrotic pus mixed with numerous acute angle branching, septal, fungal hyphae. representing *Aspergillosis* (Fig. 1).

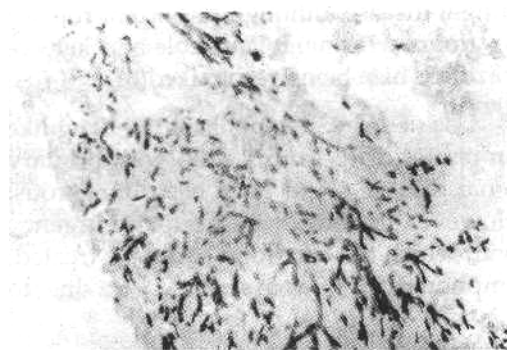


Fig. 1 Histopathology of abscess aspirate showing *Aspergillus*.

Discussion

The common causes of CNS mycosis in India are *Cryptococcus neoformans*, the *Aspergillosis* species, *Zygomycotic trichoides*, in that order(2). They often occur as super infections. *Aspergillus fumigatus* is the species most likely to cause disease(3). CNS mycosis is always secondary to a primary disease elsewhere in the body, namely lung, skin, gastrointestinal tract and endo-cardial lesions (2). Lung is the organ

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most frequently affected in children(3). However, in this case no primary focus was found. Immunosuppression with steroids was the probable predisposing factor. Sometimes, CNS mycosis can also affect healthy individuals without any predisposing factors(4,5). The CNS lesions may be in the form of meningitis, meningoencephalitis, granuloma, abscess and rarely microabscess, infarction and hemorrhage. The presentation may be varied. In this particular case, the CNS lesion was in the form of an abscess and the presentation was that of hemiparesis.

Treatment of human CNS fungal infections is at best unsatisfactory (6). Amphotericin B is the most effective therapeutic preparation for most neurologic fungal disease although important role for 5 - flourocytosine, miconazole and ketoconazole is also being recognized(6).

Use of a severely nephrotoxic drug like amphotericin B in this child with primary renal disease could have been dangerous. However, in veiw of the need and urgency with which the condition had to be treated, amphotericin B was started. But due to various factors including financial constraints, the child got discharged against advice and was lost to follow up initially.

Subsequently he has been attending the OPD with epilepsy. The child has no neurological deficit and is intellectually normal.

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