the diagnostic yield of enteroscopy in bleeding gastrointestinal vascular lesions such as angiodysplasia and coupled with a double balloon enteroscopy management of these extensive lesions is possible with a minimally invasive and safe procedure.

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Tuberculous Brain Abscess — A Diagnostic and Therapeutic Challenge

Sir,

Central nervous system tuberculosis may present as commonly encountered tuberculous meningitis or tuberculous mass lesions [common tuberculoma, and rare tuberculosis brain abscess (TB-Abs)]. TB-Abs was first described by Evans and Rand (early 1930s), and is still very rare in world literature. This rare case report serves as a reminder for tuberculosis as etiology of brain abscess in a HIV-negative patient, who recovered completely after neurosurgical intervention.

A 15 years boy, without childhood vaccination, presented with weeklong history of high fever, headache, vomiting, generalized convulsions and double vision on looking towards left. There was no previous history of convulsive disorder, head trauma or history suggestive of any infective focus anywhere. He was febrile, irritable, disoriented with signs of meningeal irritation; and had left sixth cranial nerve palsy, left-sided hemiparesis with absent papilloedema – suggestive of meningitis with raised intracranial tension. Other systems were non-contributory.

Guarded lumbar puncture revealed slightly raised opening pressure; CSF protein was 185 mg/dL, sugar 68 mg/dL, cell 133/mm³ with 67% neutrophils; gram stain, Ziehl-Neelsen stain and India ink preparations were negative with adenosine deaminase level 43 IU/L (borderline rise). Peripheral blood showed neutrophilic leucocytosis with high ESR. Blood sugar was normal and HIV was negative. Pyogenic meningitis was suspected and CSF RNA PCR for *Mycobacterium tuberculosis* was sent. CECT brain scan revealed linear hypodense area at right parasagittal regions in frontal and occipital area; generalized edema (right > left) with mild midline shift towards left (Fig. 1) – suggestive of meningitis with cerebritis. A normal EKG, chest X-ray and echocardiography ruled out silent cardiac source of infective emboli.

Treatment started with head elevation, oral phenytoin, intravenous mannitol, ceftriaxone and vancomycin. Antibiotics were stopped after four days without any clinical improvement. Meanwhile, CSF-RNA PCR for *Mycobacterium tuberculosis* came out to be positive. Category I antituberculous chemotherapy was started along with intravenous dexamethasone. Repeat CECT brain after seven days was suggestive of brain abscess (Fig. 2 and Fig. 3). Neurosurgical intervention was decided; during operation 35 ml of cream colored pus, negative for gram stain but teeming with acid fast bacilli (Fig. 4), was drained. Dramatically, the patient became afebrile with improvement of all clinical parameters. He was discharged on 14th post-operative day with a diagnosis of TB-Abs, and advised to continue antituberculous regimen with oral prednisolone.

TB-Abs, unique in teeming with tubercle bacilli, results from liquefaction of caseous center of a tuberculoma and may present as a single or multiple mass lesion with or without concomitant meningitis, with more toxic features...
like headache, fever, delirium and focal neurological signs. Neurosurgical drainage is usually required as drug treatment is seldom sufficient. Whitener found that TB-Abs usually present acutely, often in the third and fourth decades, commonly have a supratentorial location with focal neurological signs, and are associated with historical and laboratory evidences of tuberculosis. Our case presented at a young age without previous history of tuberculosis. Clinically, diagnosis of TB-Abs is difficult as it simulates pyogenic abscess; radiologic appearance and failure to respond to standard antibiotics arouse suspicion. In vivo proton magnetic resonance (MR) spectroscopy and magnetization transfer MR imaging may differentiate tuberculous from pyogenic abscesses, influencing management. However, gold standard of diagnosis remains on demonstration of innumerable tubercle bacilli in the aspirated pus.

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