Listeria Meningitis with Disseminated Tuberculosis in a HIV Positive Individual

Sir,

Though described in literature, listeriosis and bacteremia in HIV positive individuals has seldom been reported from India. We, therefore, report the co-existence of listeriosis with disseminated tuberculosis in an HIV positive patient. A 38-year-old housewife presented to our center with a 4 month history of low grade, intermittent fever with significant loss of weight and appetite. After admission in our hospital, she developed severe dull aching holocranial headache with multiple episodes of projectile vomiting. She was irritable and febrile (103°F) with tachycardia. Physical examination revealed a palpable liver of 3 cms below the right costal margin. She had features of meningeal irritation with neck stiffness and bilateral extensor plantar responses with no focal neurological deficits.

Complete blood count showed a total leukocyte count of 5300/cu mm (67% neutrophils, 26% lymphocytes and 7% monocytes), hemoglobin of 7.3 gm% and platelet count of 81,000/cu mm. Renal and liver function tests were within normal limits, except for hypoalbuminemia. Ultrasonogram of the abdomen showed multiple intra-abdominal

lymphadenopathy; involving the peri-pancreatic, peri-portal and para-aortic groups. Computerized tomography (CT) scan of the brain with contrast was normal, and cerebrospinal fluid (CSF) analysis showed clear fluid with an opening pressure of 8 cm Hg, elevated leukocyte count (2400 cells per cm/mm) with lymphocyte predominance (82%), elevated protein level (97 mg%) and a very low glucose level (10 mg%). Blood culture (BacTAlert 3D, Biomerieux) and CSF cultures grew a Gram-positive bacillus, which was identified as Listeria monocytogenes by biochemical methods, and the typical tumbling motility seen on a hanging drop. The identification was also confirmed by the Vitek 2 system. Thus, a diagnosis of Listeria meningitis with bacteremia was made, and the patient was given a 4 week course of Ampicillin and 2 week course of Gentamicin; following which her headache resolved. Blood and CSF cultures, done at the end of 4 weeks of therapy, were sterile. Endoscopic ultrasound (EUS) guided biopsy of the retropancreatic lymph node showed the presence of acid fast bacilli, suggestive of tuberculosis and hence the patient was also started on anti-tuberculous therapy. She was also initiated on highly active anti-retroviral therapy (HAART), 2 weeks after initiation of anti-tuberculous therapy.

Listeria monocytogenes is a Gram-positive bacillus, which is usually associated with meningitis and septicemia in neonates and in immunocompromised individuals; like the elderly, those with malignancies, those undergoing solid organ transplant, and HIV positive individuals. In India, Listeriosis has been described in pregnant women and in neonates.[1,2] So far, there has been only 1 case report of Listeriosis occurring in a seropositive individual from India.[3]

Listeriosis is a rare disease in seropositive patients and this poses a diagnostic challenge, particularly if there is a delay in the positivity of cultures. Once diagnosed, even invasive disease is easy to treat, with prompt response to appropriate antibiotics. Also, in the setting of an immunocompromised patient, it is important to consider and to evaluate for multiple opportunistic infections.

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