INTRAMEDULLARY DIFFUSE TUBERCULAR LESION RESEMBLING GLIOMA

SIR,

Of the various forms of spinal tuberculosis, intramedullary spinal tuberculomas (IMT) are least common (2/100,000 of all tuberculosis). We recently encountered a case, which was diagnosed as glioma after imaging was done, leading to neurosurgical intervention, which later turned out to be a tubercular lesion. This case report underscores the importance of keeping a high degree of suspicion for tuberculosis in an endemic area as ours.

A 45 years old HIV seronegative gentleman presented with a gradually progressive weakness in both lower limbs since past two months. About a month later, he developed increased frequency of micturition leading to incontinence fifteen days ago. There was no prior history of fever, trauma, cough, sputum production or weight loss. The general physical examination was unremarkable. Neurological examination revealed hypotonia in both lower limbs (power lower limbs 3/5 distal, 4/5 proximal), and bilateral knee and ankle reflexes were sluggish. Bilateral planters were flexors. Both upper limbs were normal, there were no meningeal signs, spinal tenderness or deformity. Rest of systemic examination was normal.

Radiographs of cervico-dorsal spine and chest were normal, MRI cervico-dorsal spine revealed hypointense intramedullary lesion on T1, hyperintense on T2 with minimal enhancement on contrast extending from C6-D6 with obliteration of CSF space. Provisional diagnosis of intramedullary glioma was considered and patient was planned for surgery. He underwent laminectomy extending from C6 to D6 vertebrae. Per-operatively the epidural space was normal, and a vertical incision on the dorsal aspect of cord revealed a firm grayish, relatively avascular intramedullary tumor. This was poorly encapsulated and could be removed partially with difficulty. There was no caseation. Operative impression was of an intramedullary glioma. Histopathology however, revealed it to be tuberculous granulation tissue with well formed epitheloid granulomas and Langerhans type of giant cells. Postoperatively patient deteriorated (lower-limb power 1-2/5 now), and also developed sensory deficit below D4 dermatome. Patient was put on anti-tubercular therapy, and on follow up he made moderate recovery in sensory functions with increased tone in the lower limbs associated with flexor spasms.

IMT has been described in young immunosuppressed2 as well as immunocompetent individuals.3 The clinical presentation is of a subacute spinal cord compression. The magnetic resonance imaging appearance is of a hypointense ring enhancement, with or without central hyperintensity (reflecting caseating necrosis) on T2 images and hypo to isointense rings on T1 images.4 The isolated intramedullary affection, without either pulmonary or meningeal involvement, as in the present case, is an uncommon finding in present case. This suggests that in the present case silent hematogenous dissemination of primary tuberculosis could be responsible for such an isolated lesion.

The mainstay of treatment of IMT is anti-tubercular therapy, but surgical intervention is indicated for (a) large lesions with rapid deterioration of the neurological status, (b) non-specific neuroimaging features, (c) paradoxical increase in the size of the lesion following antitubercular therapy.5

The present case emphasizes the fact that in an endemic area, tuberculosis can have uncommon presentations and imaging findings can be misleading. In this case due to a provisional diagnosis of glioma, surgical decompression of the lesion was attempted. Had preoperative suspicion of diagnosis of tuberculosis been considered, a more conservative approach could have resulted in a better outcome.

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SIR,

A recent study published in Mutation Research has unraveled the purity and composition of water in Indian reservoirs. Most, if not all of the previous studies conducted in India have provided positive results, based on various in vivo and in vitro tests. There are several such studies that make us to admit the fact that we are consuming totally contaminated water (Table 1). Even though such phenomena are observed globally, we are less concerned about the purity of water we drink, possibly due to the dependency of large part of the human population and veterinary fauna on unclean river water. Such studies have also shown that diseases such as cancer are subtly increasing possibly due to the induced mutagenicity and carcinogenicity of water-borne agents, like the pesticides. Besides, some studies have shown that there are many varieties of chemicals in
One such episode is the vehemently increasing frequency of cancers and birth defects among the villagers in a remote hamlet called Swarga (it is a Kannada word meaning- heaven!) in Kerala state of south India, possibly due to high levels of the pesticide- Endosulfan being sprayed for years to protect the cashew plantation. A few scientists believe that water reservoirs (rivulets) around the site might show very high levels of said pesticide (although not conclusively known), responsible for hazardous clinical conditions.

With minor differences, other countries too present similar scenarios. These studies simply indicate that we are not safe in a world of increasing industrialization, lack of sanitary engineering and abysmal insipidity of law-enforcing authorities. Increasing teratogenesis, cancer-rate and other associated health problems (for example-infertility), therefore have correlation with the quality of drinking water. In this context, the study by Siddique and Ahmad has come as another warning to the public as well as government.

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MENINGEAL CARCINOMATOSIS – AN UNUSUAL CAUSE OF MULTIPLE CRANIAL NERVE PALSYES AND SENSORY NEUROPATHY

Sir,

Neurological manifestations of a distant primary malignancy can occur due to intraparenchymal metastasis, leptomeningeal carcinomatosis and paraneoplastic syndromes.1 Leptomeningeal carcinomatosis is diffuse involvement of meninges by the tumor cells and involves the cerebral hemispheres, cranial nerves & spinal cord and roots.2 We present a patient with rare combination of all the three forms of extensive neurological involvement due to dissemination from a silent primary site.

A 60-year-old man presented with progressive weakness in right upper and lower limbs, impaired hearing in right ear, and diminished vision in right eye over past one month. Later he developed inability to close right eye and deviation of angle of mouth to left side. There was no headache, fever, convulsions, or altered sensorium.

On neurological examination, visual acuity was diminished in the right eye, but well preserved in the left eye (6/18). A sensorineural deafness and lower motor neuron facial palsy on the right side were noted. There was hypotonia on right side with normal power on both sides. He had decreased pain, joint position and vibration sense on right side. All reflexes were diminished and plantars were extensor on right side.

CT scan of brain was normal. CSF examination showed 70 cells with 60% lymphocytes with normal sugar and proteins. Pure tone audiometry revealed bilateral sensorineural deafness, more severe on the right side. Electrophysiological studies revealed generalized sensory neuropathy.

MRI with gadolinium contrast revealed multiple intraparenchymal lesions with enhancement (Figure 1) in both cerebral hemispheres. A repeat CSF cytology detected adenocarcinoma cells and confirmed the diagnosis of Meningeal carcinomatosis.

CT scan of chest revealed a solitary pulmonary nodule (Figure 2) in the posterior segment of right upper lobe. Transpleural CT guided biopsy of the lesion confirmed an adenocarcinoma. The patient was discharged.