Hemichorea resulting from ring enhancing lesion in the cerebral peduncle in an immunocompromised patient

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ABSTRACT

Although uncommon, infections of the central nervous system with human immunodeficiency virus (HIV) can be associated with movement disorders. We report a case of 22 year immunocompromised male patient the hemichorea was the initial manifestation of cerebral peduncle tuberculoma. For the management of chorea due to tuberculoma, treatment with corticosteroid therapy is recommended. In spite of the good control of underlying pathology in some cases the abnormal movements may persist.

Keywords: chorea, tuberculoma, movement disorder, HIV, immunocompromised

INTRODUCTION

Chorea is a movement disorder that is usually characterized by continuous, non-patterned, involuntary movements (1). Although uncommon, infections of the central nervous system with human immunodeficiency virus (HIV) can be associated with movement disorders (2-6). We report a case of hemichorea as the initial manifestation of cerebral peduncle tuberculoma in an immunocompromised patient.

CASE REPORT

A 22 year male patient presented with abnormal movements of the right half of the body including face of 8 days duration. Along with abnormal movements the patient was complaining of mild generalized headache of similar duration. There was history of one episode of generalized tonic clonic seizures 20 days back. Patient was managed at a peripheral hospital with Phenytoin (300 mg per

day) and it could be controlled. Patient had past history of pulmonary tuberculosis and received incomplete treatment. His general and systemic examination was normal. He was conscious, co-operative and afebrile with normal blood pressure. There was no lymphadenopathy. On neurological examination there was no cranial nerve involvement and no motor or sensory deficits. Deep tendon reflexes were normal. Patient had abnormal movements of right half of body that was also involving the face and tongue. The movements were repetitive, involuntary, involving both distal and proximal part and present throughout the period of waking. Movements left the patient exhausted and confined to bed. There were no cerebellar signs. There were no signs of meningeal irritation. Clinical diagnosis of pulmonary tuberculosis, with seizures with hemichorea was considered. Blood investigations revealed ESR of 117 mm in 1st hour and ELISA was positive for HIV. Serology for toxoplasmosis was negative. Chest X-ray showed the

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Article History:
Received: 12 November 2017
Accepted: 22 November 2017

FIGURE 1. Chest X-ray showing the cavity in right upper lobe (A), that has healed after the ATT (B)

FIGURE 2. Computerized scan (CT scan) brain showed ill-defined lesion involving the left high parietal region with perilesional oedema

evidence of healing of tubercular cavity and associated sequel (Fig. 1). Computerized scan (CT scan) brain showed ill-defined lesion involving the left high parietal region with perilesional oedema (Fig. 2). Further investigation with magnetic resonance imaging (MRI) confirmed this lesion and in addition it also showed a ring enhancing lesion in the subcortical white matter on left side extending in to the left cerebral peduncle (Fig. 3 and 4). The patient was treated with ATT, haloperidol, steroid and clonazepam along with phenytoin. Although the follow up CT scan showed resolution of the lesions and the movements were also controlled temporar-

ily, however it recurred despite 80 mg haloperidol and 8 mg of clonazepam per day.

DISCUSSION

Hemichorea, although unusual but can be associated with stroke and rarely with infections, drug usage, metabolic derangement, neurodegenerative disorder, tumors, and hyperglycemia (1). Various structural lesions involving the subthalamic nucleus, corpus striatum, cerebral cortex, thalamus, cerebral peduncle and brain stem have been implicated in the development of these involuntary

FIGURE 3. MRI axial images confirmed this lesion and in addition it also showed a ring enhancing lesion in the subcortical white matter on left side extending in to the left cerebral peduncle

FIGURE 4. MRI sagittal images showing the further extent of the lesion

movements (2-4,10). Movement disorders although uncommon but can be associated with infections of the central nervous system with human immunodeficiency virus (HIV) (2-6). Movement disorders in acquired immunodeficiency syndrome can be due to either the disease itself or can be due to underlying opportunistic infections (2-9). The underlying causes can be dopaminergic dysfunction and the predilection of HIV infection to affect subcortical structures (4) or the granulomatous involvement of these structures by opportunistic organisms (e.g. toxoplasmosis or tuberculosis) (7,11-13). The differential diagnosis of the large number of causes of sporadic chorea is often a challenging task (14), however along with supportive investigations, neuroimaging plays an important role to establish the

diagnosis as well as to follow up the underlying lesion's response to treatment (2-4,7). MRI would be a superior investigation over CT scan for the investigation because its versatility (15,16). The treatment of chorea includes the control of movements as well the definitive management of the underlying cause (3,8,9,13). For the management of chorea due to tuberculoma, antitubercular treatment with corticosteroid therapy is recommended (9). In spite of the good control of underlying pathology in some cases the abnormal movements may persist (12). It has been recommended that in the areas where tuberculosis is prevalent, in a patient presenting with chorea, striatal tuberculoma should also be considered in differential diagnosis (9).

Conflict of interest: none declared

Financial support: none declared

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