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Case Report

Frontal Lobe Tuberculoma Masquerading As Severe Depression A Case Report

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Abstract
Background: *Tuberculosis is one of the common infectious diseases affecting the brain mainly affecting the cerebellum and brainstem. However when such lesions involve the frontal lobe, it causes changes in personality and behaviour. These changes may be the core presenting feature of such diseases sometimes, thus delaying the diagnosis of cerebral mass lesions.*
Method: *This is an observational case report*
Case Discussion: *A 43 year old female presented to with features of severe depression such as sadness of mood, easy fatigability, anhedonia, decreased sleep with suicidal tendencies, with symptoms of weight loss, fever, decreased appetite, headache and left hemifacial spasms without any contributory personal or family history. No apparent stressors reported. Magnetic Resonance imaging with spectroscopy was done which was suggestive of tuberculoma involving bilateral frontal lobes.*
Conclusion: *To our knowledge, this is the rare case reported with a diagnosis of frontal lobe tuberculoma masquerading as severe depression. This case presenting with primary psychiatric symptoms with coexisting features of headache, fever, decreased appetite, decreased sleep, weight loss and intermittent left hemifacial spasms was found to have bilateral frontal lobe tuberculoma, thus demonstrating the importance of evaluation for organic etiology in patients who present with psychiatric symptoms masking central nervous system pathology.*
Keywords: *Depression, frontal lobe tuberculoma, organic etiology.*

Introduction

Tuberculomas are an uncommon and serious form of tuberculosis due to the haematogenous spread of Mycobacterium Tuberculosis[1]. Tuberculoma commonly occurs in cerebellum and brainstem[2]. Estimates reveal that approximately 10% of all patients with tuberculosis develop CNS involvement[3].

Space occupying lesions involving the anterior frontal lobe may present with personality changes and a loss of initiative, inhibition and cognitive function. There may also be focal motor seizures, urinary incontinence and loss of smell. An expressive aphasia occurs if broca's area in the dominant hemisphere is involved[4]. Tuberculomas are firm, a vascular, spherical granulomatous masses, measuring about 2–8 cm in diameter. They are well limited from surrounding brain tissue which is compressed around the lesion and shows oedema and gliosis[5]. Once diagnosed, the

radiographical response of tuberculoma to therapy can generally be assessed within 4 to 6 weeks[2].

There are case reports of post-natal depression with frontal lobe tuberculoma as the aetiology. Findings on imaging are non-specific (enhancing cystic lesions) and can mimic malignancies, brain abscesses, toxoplasmosis and hydatid disease[6]. These might form the core presenting feature of the disease leading sometimes to misdiagnosis.

The usual patient of tuberculoma is a child or a young adult with features of headache, seizures, focal neurological deficit or signs of raised intracranial tension. Here is a unique case of frontal lobe tuberculoma in a middle aged female which presented to our psychiatry department with typical depressive features.

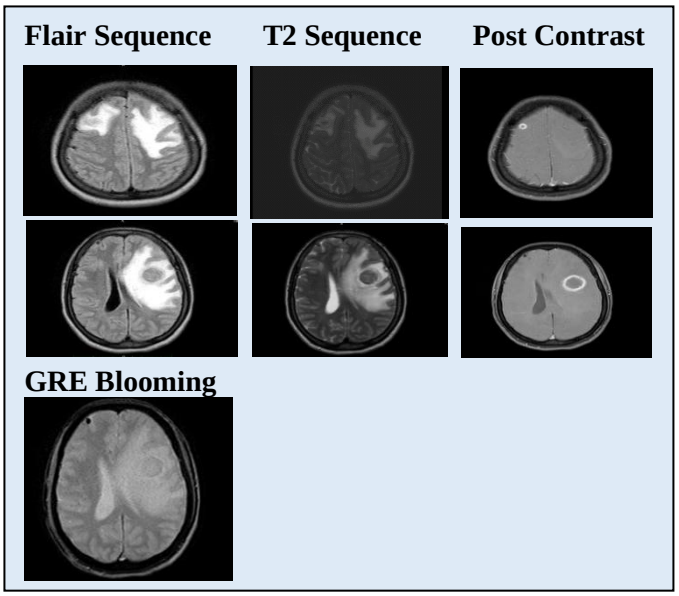
Case Report

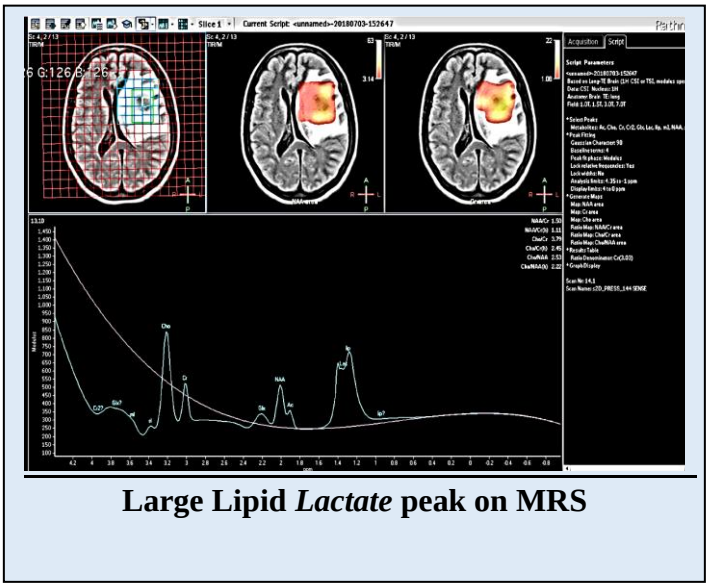
A 43-year old married female hailing from Karnataka district presented to psychiatry OPD with following symptoms which were insidious in onset with gradually progressive course. Sadness of mood, frequent crying spells, heaviness in head with feelings of nausea occasionally, easy fatigability, anhedonia, decreased sleep and appetite, weight loss, and fleeting death wishes. On detailed history taking, the informants reported that these symptoms were not sudden in onset and were preceded by mild fever followed by irrelevant talking which lasted for a day. Stressor was found in form of marriage of her first daughter against her wish who then eloped from home and did not return following which patient developed above mentioned symptoms since 1 month. No h/o Substance use/hearing of voices or seeing images/manic episodes. No h/o Seizures/ Loss of consciousness/ Head injury/ Urinary incontinence. No h/o any Focal Neurological Deficit, No h/o loss of inhibition &cognitive function/ Aphasias/ Cough with expectoration. No h/o Memory Disturbances/ Gait abnormalities/ Speech difficulty. No Contributory Past or Family history

On Physical examination, patient appeared to be thin built and poorly nourished. Examination of the systems including neurological examination was within normal limits except involuntary twitching movements in left cheek. On Mental Status examination, patient was found to be conscious and alert, psychomotor activity was decreased, talk was decreased in volume, tone and increased in reaction time, mood reported as sad, affect was decreased in range, reactivity and intensity. Psychotic symptoms were not present. Cognitive functions were intact. A provisional Diagnosis of Severe Depressive Episode without psychotic symptoms was made. Patient was started on antidepressants (Escitalopram) and sedative.

Further assessment was done after admission in psychiatry ward through blood investigations including complete blood counts, thyroid function tests, renal function tests, liver functions tests, blood glucose levels and serology for HIV, Hepatitis B and C viruses and VDRL. Neuroimaging (MRI– Brain) was done due to suspicion of organic cause and neurology reference was given in view of hemifacial spasms, headache. MRI Brain showed a large lesion in left frontal lobe (25x25mm) causing midline shift of 5mm and right frontal lobe lesion (11x10mm) likely to be giant tuberculoma. Ophthalmology referral for fundoscopy was given and bilateral papilledema was found. Investigations revealed mildly raised ESR (30mmhg) but other blood parameters were within normal limits. Medicine opinion was also taken in view of two hypotensive episodes and h/o weight loss. Intravenous fluids were started as advised and ATT was started. The diagnosis was revised to Organic depressive disorder.

MR Spectroscopy: shows a large lesion in left frontal lobe (25x25mm) causing midline shift of 5mm and right frontal lobe lesion (11x10mm) likely to be giant tuberculoma





Large Lipid *Lactate* peak on MRS

Discussion

Psychiatric Symptoms vs Medical Symptoms

It is unique presentation with classical psychiatric symptoms in female under middle age group which is quite common for depressive disorders, having significant stressor with no focal neurological deficits, seizures or any h/s/o respiratory infection blood parameters within normal limits favored a psychiatric diagnosis. Absence of past or family history of psychiatric illness fever and acute confusional state lasting for 1 day, weight loss was in favor of a organic etiology.

Neuroimaging showed large frontal lobe tuberculoma with significant midline shift. This case is unique as patient has no neurological deficit despite the large tuberculoma and the midline shift. Also the patient's depressive symptoms improved significantly with Escitalopram prior to the initiation of the treatment for tuberculoma. This case also demonstrates the significance of neuroimaging in a patient presenting with classical psychiatric symptoms.

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