



## THALAMIC TUBERCULOMA AND HEMICHOREA .

### Neurology

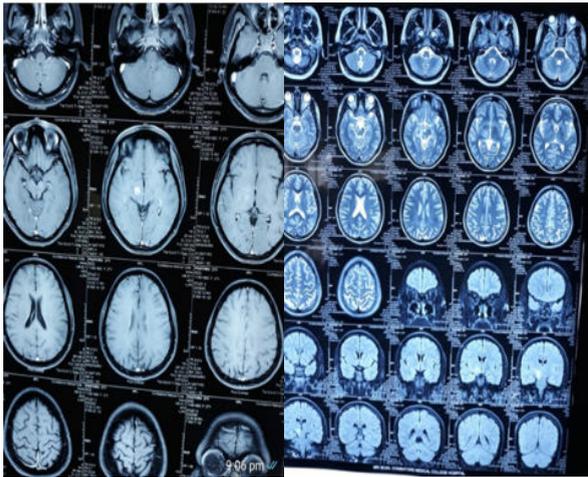
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### KEYWORDS

#### Case Summary

25 years old female diagnosed to be having retro viral infection for past six months developed subacute onset of involuntary movements of left upper and lower limb in the form of flowing movements from proximal to distal parts of the limb. On examination vitals were stable, routine blood investigations were normal. CXR and ECG were normal. Patient CD4 count is 179. Neuro-imaging revealed T2 and flair hyper intensity and T1 hypo intensity with out any evidence of diffusion restriction noted in right thalamus. Possibility of TUBERCULOMA in right side of thalamus.

#### THALAMIC TUBERCULOMA



#### DISCUSSION:

The thalamus is composed of a plethora of nuclei that make up the major part of the diencephalon, located in the ventral portion of the third ventricle and medial to the internal capsule.

A simple model of basal ganglia function states that dopaminergic and GABAergic impulses from the substantia nigra and motor cortex respectively, are funneled through the pallidum into the motor thalamus and the motor cortex. These impulses are modulated in the striatum by segregated, parallel, direct and indirect loops through the medial pallidum and the lateral pallidum/ subthalamic nucleus. Absent subthalamic nucleus inhibition enhances motor activity through the motor thalamus resulting in abnormal movements such as chorea, dystonia, and tics.

Hyperkinetic movement disorders are characterised by increased uncontrollable motor function. They are caused by reduced basal ganglia output, which causes increased thalamocortical function which lead to the inability to stop unwanted movement.

Chorea is an abnormal involuntary movement disorder, one group of neurological disorders called dyskinesia (2,3).

Hemi chorea refers to chorea of one side of the body such as chorea of one arm and leg (1,4).

Human immunodeficiency viruses are two species of lentivirus (a subgroup of retrovirus) that infect humans. Over time they cause acquired immunodeficiency syndrome (AIDS), a condition in which progressive failure of the immune system allows life threatening opportunistic infections and cancer to thrive.

HIV Infects vital cells in the human immune system, such as helper T cells, macrophages and dendritic cells. HIV infection leads to low levels of CD4+ T cells through a number of mechanisms, including pyroptosis of abortively infected T cells, apoptosis of uninfected bystander cells, direct viral killing of infected cells, and killing of infected CD4 T cells by CD8 cytotoxic lymphocytes that recognise infected cells. When CD4 T cells numbers decline below a critical level, cell mediated immunity is lost and the body becomes progressively more susceptible to opportunistic infections.

Tuberculosis of the central nervous system is due to mycobacterium tuberculosis manifest commonly as tuberculosis meningitis, tuberculoma, tuberculous vasculitis and spinal tuberculosis. It is common in immunodeficiency patients, alcoholics, diabetes and HIV. MRI is preferred method of neuro-imaging for TBM, tuberculoma and spinal tuberculosis.

This patient had choreiform movements involving left upper and lower limbs with HIV Positive state. Neuro imaging revealed tuberculoma involving right thalamus resulting in left hemichorea. Magnetic Resonance Spectroscopy showed choline peak suggestive of tuberculosis. (1,2,3,4)

In this case hemichorea presented as initial manifestation of CNS thalamic tuberculoma.

Patient was treated with anti-tuberculous therapy, highly active anti-retroviral therapy with haloperidol, sodium valproate. Patient improved well.

#### REFERENCES

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