

Before Para-Chorea-Ballism can be attributed to a Pineal Mass Lesion, Alternative Etiologies Must Be Ruled Out

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LETTER TO THE EDITOR

We read with interest the article by [Singh, A.S. *et al.*, 2023] about a 52 year-old female with para-chorea-ballism of the lower limbs, vertical gaze palsy, cognitive impairment, nystagmus, and headaches attributed to pineal neoplasm [Singh, A.S. *et al.*, 2023]. The dignity of the tumour could not be determined because the patient refused to undergo biopsy or resection of the tumour [Singh, A.S. *et al.*, 2023]. The outcome of the clinical presentation remained undetermined as no follow-up investigations were reported [Singh, A.S. *et al.*, 2023]. The study is impressive but has limitations.

The major limitation of the study is that no evidence was provided that the hyperkinetic movements, vertical gaze palsy, nystagmus, and cognitive impairment were actually due to the brain tumour lesion. Because the nature of the lesion has not been clarified and the mass lesion has not been removed, it cannot be guaranteed that the clinical presentation was actually due to this lesion. In this context, cerebrospinal fluid (CSF) studies and electroencephalography (EEG) recordings are lacking.

The second limitation is that the differential diagnoses of para-chorea-ballism were not sufficiently excluded. We should know whether Huntington's disease, rheumatic fever, Borelliosis, toxoplasmosis, HIV, syphilis, Legionnaire's disease, Creutzfeldt-Jakob disease (CJD), meningitis, encephalitis, lupus, multiple sclerosis, sarcoidosis, Sjögren's syndrome, Behcet's disease, acanthocytosis, hypo-/hyper-parathyroidism, hypomagnesemia, hypocalcemia, hepatopathy, polycythemia vera, hereditary disease, intoxication (e.g. carbon monoxide, mercury), and epilepsy were sufficiently excluded.

A third limitation is that no screening for malignancy was performed [Singh, A.S. *et al.*, 2023]. Since the lesion could also represent cerebral metastasis, it is imperative to evaluate the patient for malignant neoplasms using

lung/abdomen CT, gastroscopy, colonoscopy, gynaecological examination, mammography, thyroid ultrasound, and tumour markers. In this context we should also know whether the patient suffered from weight loss or night sweats.

A fourth limitation is that cognitive impairment remained unexplained. Since the mass lesion does not explain the cognitive decline, it is important to provide alternative explanations for it.

A fifth limitation is that the MRI was apparently performed without the use of contrast medium. Without contrast medium, MRI may miss cerebral inflammation, infection, diffuse or perifocal cerebral oedema, and whether or not the mass lesion was vascularised.

No satisfactory explanation has been provided as to why chorea-ballism stopped at night. Since hyperkinesia occurred predominantly while lying in bed and was attributed to a ganglio-thalamic disconnection, it would be expected that it also occurs during sleep.

We disagree that Guillain-Barre syndrome (GBS) is associated with the chorea-ballism mentioned in the discussion. GBS is a disease of the peripheral nervous system (PNS) and not the central nervous system like chorea-ballism.

In conclusion, the excellent study has limitations that call the conclusions into question. Addressing these issues would strengthen the conclusions and could improve the status of the study. Before attributing para-chorea-ballism to pineal mass lesion, alternative aetiologies must be adequately ruled out.

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Ethical compliance statement: The authors confirm that the approval of an institutional review board or patient consent was not required for this work. We confirm that we have read the Journal's position on issues involved in ethical publication and affirm that this work is consistent with those

guidelines. This article is based on previously conducted studies and does not contain any new studies with human participants or animals performed by any of the authors.

REFERENCES

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