

Jaw Tremors a Rare Presenting Feature in Early Onset Parkinson's Disease

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Abstract

Background: Parkinson's disease is growing source of disability and mortality in neurodegenerative disorders, initially considered as motor system disorder but currently it is recognized as complex neurological condition with diverse clinical features.

Case: A middle-aged female patient had mild tremors of hands for few months, treated for post stroke epilepsy with sodium valproate which worsened her Parkinsonism.

Conclusion: While sodium valproate often overlooked has important extra pyramidal effects and can cause or exacerbate Parkinsonism

Keywords: Jaw tremors • Movement disorder • Parkinson's disease • Electroencephalography • Sodium Valproate

Abbreviations

GCS: Glasgow Coma Scale, EEG: Electroencephalography, CSF: Cerebrospinal Fluid, ANA: Antinuclear Antibody, AEDs: Anti-epileptic Drugs, ESR: Erythrocyte Sedimentation Rate, DAT scan: Dopamine Active Transporter

Introduction

Parkinson's disease is growing source of disability and mortality in neurodegenerative disorders. Its prevalence is 94 cases per 100,000 people. Parkinson's disease was initially considered as motor system disorder but currently it is recognized as complex neurological condition with diverse clinical features. Cardinal features of Parkinson's disease are rigidity, bradykinesia, and tremors. Neuropsychiatric features and various non motor features can also occur in Parkinson's disease. Tremors in Parkinson's disease are most commonly found in upper extremities as compared to lower. 2,3 Facial tremors which include lip and jaw tremors occur infrequently in Parkinson's disease patients, can be present in early onset of disease. Facial tremors are reported as 1.7% at

disease onset and its prevalence is 14%. 4 In this case report we present case of 55 years of age female who presented with jaw tremors as initial presentation of Parkinson's disease [1].

Case Presentation

A female of 55 years of age, having hypertension, hyperthyroidism and chronic atrial fibrillation and had history of being treated for stroke with post stroke epilepsy presented in emergency with complaint of abnormal orofacial and limb movements. Her movements had progressed over a period of 4 days. There was no history of preceding febrile illness, loss of consciousness, vomiting and behavioral disorder.

On examination, her general physical examination was normal with vital signs of blood pressure of 130/70 mmHg, Pulse of 86 beats/min and regular, respiratory rate of 16 breaths/min, temperature of 37°C, random blood sugar levels of 136 mg/dl and oxygen saturation of 97% at room air. On neurological examination, Her Glasgow coma scale was 15/15, conscious and oriented with respect to time, place, and person, although had hypomania of face, pupils were equal and reactive to light, Extraocular movements were intact, neck was supple, moving all limbs, plantar response was bilateral equivocal. There were resting tremors on right side of body (grade 2) and left side of body (grade 1), generalized rigidity (right > left), persistent neck and jaw tremors. Rest of neurological examination was normal which include speech and swallowing, cognition, cerebellar function, and sphincters control (bowel and bladder) (Table 1).

Table 1. Laboratory investigations of patient

Blood complete picture	Liver function tests	Renal function tests
Hb 11.3	Bilirubin total 0.190	Urea 12.1
WBCs 6130	ALT 9.59	Creatinine 0.8
Platelets 10500	ALP 72.1	
	Serum electrolytes	
ESR 18	Sodium 141.9	
	Potassium 4.79	
ANA negative	Calcium total 6.62	
	phosphorus 2.49	
CPK 48.2		

Her preliminary investigations were done. Blood complete picture showed Hemoglobin of 10.6 g/dl with decreased RBC indices and normal Total leucocyte count and platelet count. Serum chemistry and Hepatitis B and C screening were normal along with coagulation profile.

Electrocardiography and chest X-ray was unremarkable. Plain computed tomography scan of brain was unremarkable. Magnetic resonance imaging of brain with stroke protocol and contrast came out to be unremarkable. Electroencephalography (EEG) was normal. Cerebrospinal fluid studies were refused by patient. Antinuclear Antibody (ANA) was negative. Erythrocyte Sedimentation Rate (ESR) was 18/hour. Serum autoimmune encephalitis profile was negative. Echocardiography showed Ejection fraction of 60% with normal left ventricular systolic function and grade 2 diastolic dysfunction. Thyroid profile was normal. A serum vitamin B₁₂ and Ceruloplasmin level was

within normal range. A DAT scan not done due to non-availability of facility in our setup Figure 1 and Figure 2.

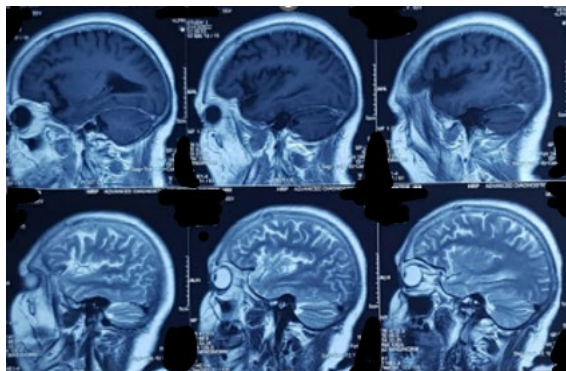


Figure 1. MRI Brain with contrast sagittal view T1 with contrast and T2 showed no significant abnormal changes

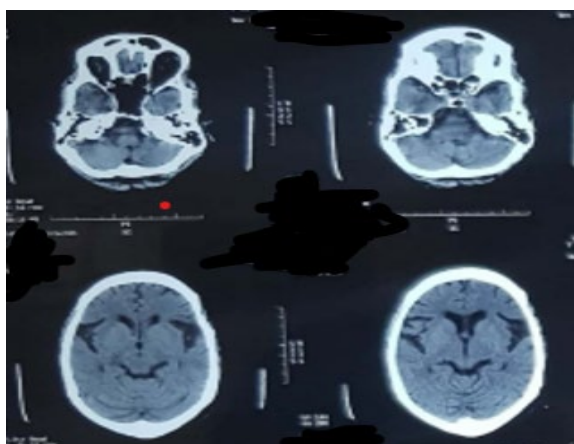


Figure 1. CT Brain plan axial view

In view of normal workup mentioned above a review of history was done. Patient was on antiplatelet and statin therapy for 1 year in view of stroke and was on antiepileptic drug i.e., levetiracetam for 3 months then shifted to Sodium valproate recently due to non-availability of previous drug in context of scar epilepsy. She presented to us with worsening of symptoms that were already present and were treated as focal fits. On reviewing history and onset of clinical symptoms carefully, it came out to be jaw tremors and left upper limb tremors as the first event one year back and these symptoms disappear during sleep. It was clinical conclusion that patient had mild Parkinsonism and was worsened by the recent switch Sodium valproate. She was started on levodopa/carbidopa (1/3 X TDS) and her symptoms start resolving. She was discharged with diagnosis of Parkinsonism.

Discussion

Facial tremors have vast range of differential diagnosis which includes benign essential tremors, orofacial dyskinesias, drug induced parkinsonism, as initial presentation of Parkinson's disease.

- Jaw tremors as initial feature of Parkinson's disease has been rarely reported previously. In our case she has been diagnosed as case of scar epilepsy and was given sodium valproate as treatment, which exacerbated her symptoms leading to hospital admission. We did detailed workup in this patient to rule out infective, autoimmune and vascular causes. Dominant central generator is responsible for causing orofacial and limb tremors in Parkinson's disease patients.

- Rest tremors are cardinal features of Parkinson's disease and help in diagnosing condition earlier.
- More than 20% of early Parkinson's disease patient presented with postural or kinetic tremor [2]. The exact anatomical cause of these tremors is unclear but it occurs mainly due to impairment of cerebello-dentato- thalamo-cortical and basal ganglia – thalamocortical circuits
- Facial tremors respond well to dopaminergic therapy. We stopped anti-epileptic drugs in our patient and started her on dopaminergic therapy, she responded to that [3,4].

Conclusion

Our conclusion is that we should do detailed examination and complete workup in elderly patients who presented with abnormal facial and limb movements before starting anti-epileptic drugs, though jaw tremors is rare presenting feature in Parkinson's disease but as our patient is in 5th decade of life, we should consider early onset Parkinson's disease in such patients.

References

1. Udagedara, T.B. and Gooneratne, I.K "Jaw tremor: a manifestation of vascular parkinsonism?-a case report." *BMC neurol.* 18 (2018): 1-4.
2. Pasquini, J. et al."Progression of tremor in early stages of Parkinson's disease: a clinical and neuroimaging study." *Brain* 141.3 (2018): 811-821..
3. Bhatia, Kailash P., et al. "Consensus Statement on the classification of tremors. from the task force on tremor of the International Parkinson and Movement Disorder Society." *Mov. Disord.* 33.1 (2018): 75-87.
4. Ou, R. et al. "Facial tremor in patients with Parkinson's disease: prevalence, determinants and impacts on disease progression." *BMC neurol.* 21.1 (2021): 1-9.