

Assessing Choreiform Movements in a Psychiatric Inpatient

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Introduction

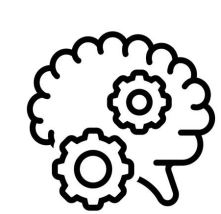
- Psychiatric patients may develop a range of abnormal movements due to medications or neurological conditions, including: parkinsonism, dystonia, akathisia, tardive dyskinesia, tremor, chorea, tics, and myoclonus.
- These movement disorders are often drug-induced, especially by dopamine receptor blocking agents (e.g., antipsychotics), but can also be a **red flag** for underlying neurological conditions.
- **Chorea** is defined as irregular, unpredictable, non-rhythmic movements and can be a feature of **extrapyramidal side effects (EPES)**, but may also signify an **underlying neurodegenerative disorder** such as Huntington's disease (HD).
- Huntington's disease is a rare genetic disorder characterized by a clinical triad of:

MOTOR



Involuntary Movements (e.g.: **chorea**)

COGNITIVE



Memory and Executive decline

PSYCHIATRIC



Mood and behaviour changes

Case

45-year-old woman admitted to an inpatient psychiatric unit with a history of 14 psychiatric admissions

- o most attributed to presumed **manic episodes with psychotic features**, but without formal diagnosis.

The patient was re-hospitalized after 4 months, for behavioural changes with risk to others.

During clinical observation, the patient presented with **previously undocumented involuntary movements** predominantly involving the cervical region.

Motor examination revealed irregular, non-rhythmic, flowing **involuntary movements consistent with chorea**. The absence of sustained abnormal posturing argued against primary dystonia, though antipsychotic-induced movement disorder remained a diagnostic consideration.

These occurred alongside disorganized thought, dysphoric mood, psychotic symptoms, attention deficits and weight loss.



Familial history of Huntington's disease could not be determined, as the **patient was adopted**.

Given the new onset of choreiform movements and diagnostic uncertainty, **neurology input was sought**, and investigations included neuroimaging (CT scan) and genetic testing for Huntington's disease.

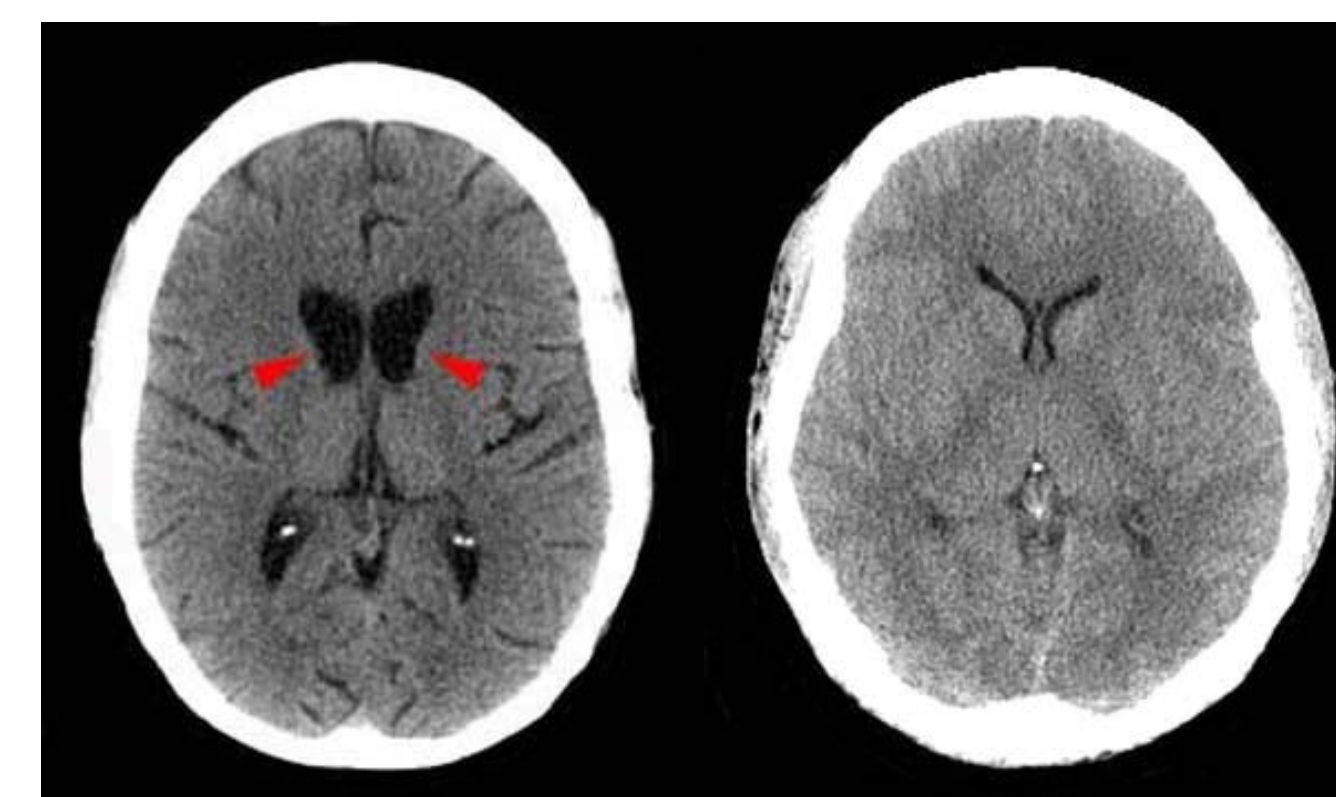


Figure 1 - Axial head CT scans. The image on the left exhibits alterations typical of HD, such as bilateral caudate head atrophy (red arrowheads) and generalized atrophy, in opposition to an age-matched control on the right. Credited to University of Virginia (2021)

Results vs Discussion

Both neuroimaging and genetic testing were **negative** for Huntington's disease.

The decided approach was a medication switch from olanzapine to risperidone, after which an improvement in the choreiform movements was observed.

The overall clinical picture was felt to be most consistent with a **medication-related movement disorder**

Chorea, albeit less common and often forgotten, **can also be a manifestation** of tarditive or acute **antipsychotic-induced movement disorders!**

- o choreiform movements does not always equal neurodegenerative disorders such as HD!

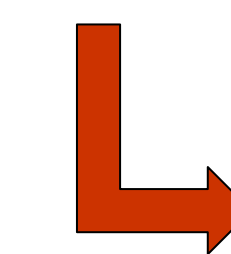
	Drug-induced	Neurodegenerative
Course and reversibility	Acute or sub-acute; Often reversible*	Insidious; Progressive and irreversible
Associated symptoms	May occur with other EPES or in isolation	usually other features (see HD triad)
Family history	Usually absent	Positive
Response to intervention	Usually resolves with discontinuation of medication*	Progressive
Age at onset	Any age	Mid-adulthood (except juvenile form)
Imaging features	Usually normal	Frontal and caudate atrophy; Striatal volume loss

Table 1 - Some characteristics can help differentiate drug-induced chorea from chorea due to neurodegenerative disorders, like HD. *except tardive syndromes

Accurate assessment relies on **detailed clinical phenomenology**, **timing** relative to medication exposure, and response to intervention to distinguish drug effects from primary neurological diseases.

Some "red flags" that raised suspicion of HD:

- known patient with extensive history but **no previous history of EPES**
- typical psychiatric, motor and cognitive features associated with weight loss
- age of onset
- unknown family history



joint Neurology and Psychiatry decision to investigate for HD!

Conclusion

This case highlights the **importance of taking a critical approach** to motor symptoms in psychiatric patients, even in the context of extensive psychiatric history!

early consideration and appropriate exclusion can have a **significant impact on the treatment plan and prognosis!**

inadequate phenomenological assessment of movement disorders in a psychiatric settings **can perpetuate diagnostic error** across multiple admissions

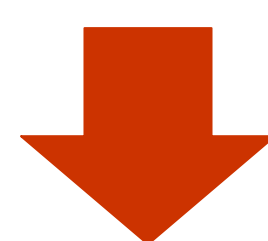
This is particularly relevant in movement disorders with significant psychiatric overlap, such as HD, that may be misinterpreted as treatment-related side-effects or manifestations of primary psychiatric illness!

- o only through thorough phenomenological assessment, history taking and **interdisciplinary communication** can we arrive at the best diagnostic approach.

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Aim

Movement disorders can prove a significant diagnostic challenge in psychiatric settings, particularly due to **overlapping motor and psychiatric features** that may mimic conditions (such as antipsychotic-induced EPES)



This case aims to highlight the importance of careful phenomenological assessment of abnormal movements in psychiatric patients.

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