Stroke mimics: Distinguishing features & prevalence

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Introduction

Sudden neurological symptoms often raise the alarm for a strike

It prompt immediate thrombolytic treatment pathways.

However, various conditions, known as "stroke mimics," present similarly and must be discerned to avoid inappropriate stroke interventions.

- **Stroke mimics** are medical conditions that present symptoms similar to those of a stroke, such as sudden weakness, numbness, speech difficulties, confusion, or visual disturbances, but are caused by other underlying non vascular issues such as :

➞ **migraines, seizures, low blood sugar, or even psychological conditions...**

- **Why is it important to detect ? :**
  - These conditions can complicate initial assessments in emergency settings because their symptoms closely resemble those of real strokes.
  - Misdiagnosis can lead to inappropriate treatment, which may cause harm.

Aim of the study

Identify the prevalence and characteristics of stroke mimics in our patient cohort.

Methods

- **Type :** Retrospective study
- **Targeted people :** All cases initially suspected as strokes within the thrombolytic treatment window.
- **Duration :** 3 years from January 2021 to December 2023
- **Study site :** Ibn Rochd University Hospital's emergency department
- **Collected Data include :**
  - Demographics
  - Presentings symptoms
  - Clinical examination
  - Imaging finding

Discussion

- Stroke mimics typically involve ***younger***, ***predominantly female*** individuals with ***less severe symptoms*** and ***no elevated blood pressure***.
- Unlike broader literature where seizures (21%) and metabolic issues (11%) are common mimics, functional disorders were most prevalent in our setting.
- Thrombolysis was less frequent in our practice compared to the literature where it happens in up to 26% of the cases.
- ***Effective management of stroke mimics*** necessitates consistent follow-up care to evaluate treatment efficiency and to modify strategies as required.
  - **Why is it important ?**

    Particularly for functional disorders, where symptoms may persist or recur, highlighting the need for long-term management plans.
  - **How ?**

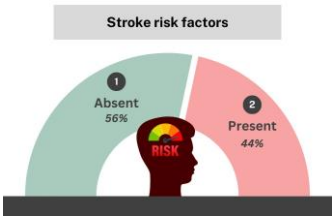
    Through multidisciplinary approach. Including a collaboration among neurologists, psychiatrists, primary care physicians, physical therapists, and other specialists to ensure comprehensive care

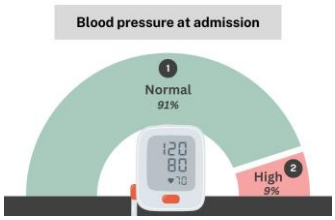
Take home messages

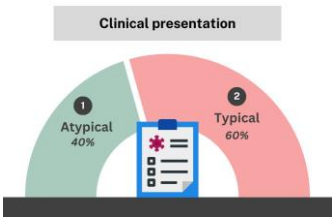
- To effectively ***distinguish*** stroke ***mimics*** from actual ***strokes***, It is crucial to :
  - ***Recognize*** and differentiate symptoms ***inconsistent with typical stroke patterns***
  - Be familiar with the ***common conditions*** that present with similar symptoms
  - Carefully ***evaluate the clinical features*** that differ from those typically seen in strokes
- Functional disorders constitute a significant portion of stroke mimic cases in our study.
- Treatment in neurological and medical mimics results in prompt resolution of the symptoms. Treatment of functional disorders can be challenging and is often incomplete and requires early psychiatric intervention.

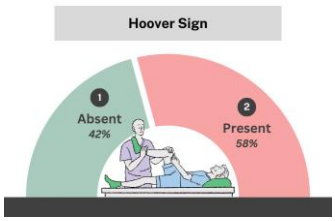
Results

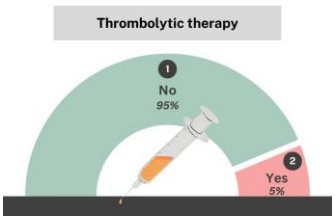
- **Population :** Of the 346 assessed patients, 90 (26%) had symptoms resembling a stroke
- **Median age :** median age of 48.8 ± 18.4 years
- **Female predominance** at 80 %

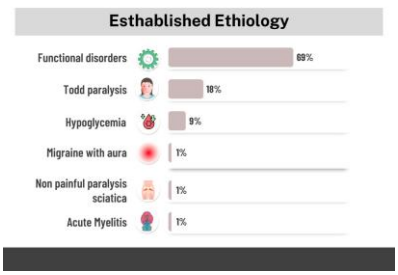












The Hoover Sign Illustration

If the examiner does not feel pressure on their hand when the patient tries to lift the weak leg, it suggests that the effort is not genuine, indicating that the weakness may be functional or non-organic

Results

- H. Buck, B., Akhtar, N., Alrohimi, A., Khan, K., & Shuaib, A. (2021). Stroke mimics: incidence, aetiology, clinical features and treatment. *Annals of Medicine*, *53*(1), 420-436.
- Okano, Y., Ishimatsu, K., Kato, Y., Yamaga, J., Kuwahara, K., Okumoto, K., & Wada, K. (2018). Clinical features of stroke mimics in the emergency department. *Acute Medicine & Surgery*, *5*(3), 241-248. Liberman, A. L., & Prabhakaran, S. (2017).
- Stroke chameleons and stroke mimics in the emergency department. *Current neurology and neuroscience reports*, *17*, 1-11.