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Short Communication

Acute stroke: Are we seeing the tip of the iceberg?

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Stroke is an epidemic now having a mortality rate even higher than most cancers. There is already a huge stroke burden and if we miss a stroke, either the person may die or come back with recurrent strokes, increasing the burden further. They missed 20% of acute stroke in academic hospitals and 26% at the community hospital. Up to, 44% of acute stroke patients were missed during the first six hours of symptom onset. Among those missed, most were in the posterior circulation. It was found that approximately 5% of DWI (Diffusion Weighted Imaging) missed acute stroke but it may be up to 25% if it is done within the first twenty-four hours. 4

Late presentation of stroke is another common phenomenon now. They found almost 56.4% presented after 4.5 hours of the ictus. Factors associated with late arrival were being alone during the event, no availability of an ambulance, not knowing the stroke was happening, and living in the outskirts (difficulty in coming up to the stroke center). Non-presentation of stroke (especially in every event) is even commoner. Many of the patients coming to the emergency room are surprised to know that they already had a stroke earlier (after confirmation by imaging). This means either they ignored the first event or the stroke happened in the silent areas of the brain. We need to act more at the community level so that people are more acquainted with acute stroke symptoms. Unfortunately, some healthcare providers assure them that mild symptoms

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will settle and they do not report to the emergency for further investigations (a good percentage of them settle initially only to come back later with a catastrophic event not being on appropriate medications).

Thus, we should have a very low threshold for suspecting stroke. The emergency team needs to first rule out stroke for any acute deficit, vertigo with nausea/vomiting, new onset headache, visual blurring, imbalance, and even a state of acute confusion / altered sensorium. In house health staff need to raise the alarm and call for code stroke on the slightest suspicion. The patient, caregiver/ family of the patient, and the treating team should understand that they can not miss the golden time of acute stroke intervention. In doubtful cases and wake-up strokes, an MRI of the brain with an angiogram is a better option.

We should understand that if we can identify stroke / TIA, we can not only save the patient from future stroke but also relieve the healthcare system from a huge stroke burden in the future. Thus remembering "a stitch in time saves nine". It is better to over investigate rather than under investigate doubtful cases (suspected to have stroke) so that least cases are missed and catastrophic consequences avoided in the future.

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Conflict of Interest

None.

References

- Arch AE, Weisman DC, Coca S, Nystrom KV, Wira CR, Schindler JL, et al. Missed Ischemic Stroke Diagnosis in the Emergency Department by Emergency Medicine and Neurology Services. Stroke. 2016;47(3):668–73.
- Kleindorfer D, Khoury J, Alwell K, Moomaw CJ, Woo D, Flaherty ML, et al. The impact of Magnetic Resonance Imaging (MRI) on ischemic stroke detection and incidence: minimal impact within a populationbased study. *BMC Neurol*. 2015;15:175. doi:10.1186/s12883-015-0421-2.
- Sylaja PN, Coutts SB, Krol A, Hill MD, Demchuk AM. When to expect negative diffusion-weighted images in stroke and transient ischemic attack. Stroke. 2008;39(6):1898–900.
- Oppenheim C, Stanescu R, Dormont D, Crozier S, Marro B, Samson Y, et al. False-negative diffusion-weighted MR findings in acute ischemic stroke. AJNR Am J Neuroradiol. 2000;21(8):1434–40.
- Khathaami AMA, Mohammad Y, Alibrahim F, Jradi H. Factors associated with late arrival of acute stroke patients

- to emergency department in Saudi Arabia. *SAGE Open Med.* 2018;6:2050312118776719. doi:10.1177/2050312118776719.
- Jones SP, Bray JE, Gibson JM, Mcclelland G, Miller C, Price CI, et al. Characteristics of patients who had a stroke not initially identified during emergency prehospital assessment: a systematic review. *Emerg Med J.* 2021;38(5):387–93.
- Thomalla G, Boutitie F, Fiebach JB, Simonsen CZ, Nighoghossian N, Pedraza S, et al. Stroke With Unknown Time of Symptom Onset: Baseline Clinical and Magnetic Resonance Imaging Data of the First Thousand Patients in WAKE-UP (Efficacy and Safety of MRI-Based Thrombolysis in Wake-Up Stroke: A Randomized, Doubleblind, Placebo-Controlled Trial). Stroke. 2017;48(3):770–3.

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