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IP Indian Journal of Neurosciences

Journal homepage: <https://www.ijonline.org/>

Case Report

Dichotomous interpretations and a stroke of luck: A case of silent cerebral hemorrhage

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ARTICLE INFO

Article history:

Received 02-10-2023

Accepted 18-12-2023

Available online 30-12-2023

Keywords:

Hemorrhage

Cerebral

Neurological

Stroke

ABSTRACT

Background: “Silent Cerebral Hemorrhage” in a young alcohol-dependent individual can pose a significant challenge to the treating physician. The neuroimaging and clinical presentation maybe dichotomous to a critical extent.

Objectives: Our aim was to explore the scientific understanding of “Silent Cerebral Hemorrhage” and share the wisdom gathered about the diagnosis and management of this rare entity.

Case Details: A 32-year-old male presented with fever and episodes of vomiting alongwith urinary incontinence, in the backdrop of heavy alcohol abuse. Detailed neurological assessment revealed no abnormal findings. MMSE indicated towards no significant cognitive deficits. On MRI, an extensive intracerebral hemorrhage was observed.

The I.C.H. score was 2/6 and the FUNC score was 8/11; which was in stark contrast to NIH Stroke Scale score of 0/42.

Blood-panel showed deranged liver enzymes. Patient was managed conservatively. Irritability was controlled using Haloperidol. Prophylactic antiepileptics were also started.

Upon follow-up, patient showed drastic improvement. Patient was started on Acamprosate for maintenance of abstinence.

Conclusion: Through this case report we have tried to highlight that “Silent Cerebral Hemorrhage” can present as a curve-ball for clinicians and psychiatrists. The dichotomy in interpretation of stroke-related scales may cause a dilemma about the course of management.

“In this case, the absence of neurological deficits was indeed a stroke of luck for the patient.”

Key Messages: “Silent Cerebral Hemorrhage” can present as a curve-ball for clinicians and psychiatrists. Hence, we should be vigilant about it in our clinical practice. The dichotomy in interpretation of stroke-related scales may cause a dilemma about the course of management.

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1. Introduction

“The worst wounds, the deadliest of them, aren’t the ones people see on the outside. They’re the ones that make us bleed internally.” — Sherrilyn Kenyon

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“Stroke” is a state of rapidly evolving neurological dysfunction which may or may not be accompanied by psychiatric manifestations.¹ Stroke is essentially classified into two types based on its etiology, namely ischemic (due to infarction) and hemorrhagic (due to rupture of blood vessels). Hemorrhagic stroke can further be subdivided into stroke caused by intracerebral hemorrhage (I.C.H.) and that caused by subarachnoid hemorrhage (S.A.H.).

Globally, incidence of ischemic stroke is highest with 60%-70%, followed by I.C.H. with 20%-25%, while incidence of S.A.H. is around 6%.² Stroke is the leading cause of disability in the world.

Cerebrovascular accident (C.V.A.) is commonly used as a synonym of stroke, although given a thought it seems to be a misnomer. A stroke is the consequence of an underlying pathology and hence is far removed from an accident. Similarly, the idea that all strokes lead to neurological dysfunction and disability is flawed. Infact, American Stroke Association has recently updated a diagnostic entity called “Silent Cerebral Hemorrhage”, which by definition does not involve neurological dysfunction.³

We present to you a case of “Silent Cerebral Hemorrhage” whose morphology on imaging and its clinical presentation were dichotomous. This dichotomy was a stroke of luck for the patient.

2. Case Presentation

A 32 year old male visited the psychiatric O.P.D. of Varun Arjun Medical College and Rohilkhand Hospital, accompanied by his wife and relatives. Patient had history of fever and episodes of vomiting, since 11 days. He complained of urinary incontinence, since 10 days. Patient had been prescribed antipyretics by some general practitioners, but his symptoms did not resolve.

Patient’s wife and relatives stated that he consumes alcohol on a daily basis and in large quantities (Average daily consumption: 540 ml of IMFL). Last consumption was the night before. Patient had no history of adverse events related to alcohol intake apart from few episodes of melena months ago. Patient’s relatives sought intervention regarding his alcoholism. Although patient’s relatives did complain about him being forgetful and more irritable than usual, yet they attributed this to consumption of alcohol. Neither the patient nor his relatives gave any history of trauma in the recent past.

No abnormality was detected on general physical examination, except presence of icterus. Based on the suspicion aroused by the symptoms (particularly urinary incontinence) a detailed neurological evaluation was done. Patient’s Glasgow Coma Scale (G.C.S.) score⁴ was 15/15. Mental status was assessed through Mini-Mental State Examination (M.M.S.E.)⁵ which returned scores of 27/30. Patient scored 1/3 in domain of recall and 9/10 in domain of orientation. The results were interpreted as indicator of lack of cognitive impairment. No neurological deficit could be elicited on evaluation.

On M.R.I. a lesion was visualized involving the right frontal lobe, which was extending to the left frontal lobe and also compressing on bilateral lateral ventricles. Further on C.T. scan this was confirmed to be an intracerebral hemorrhage with minimum volume of 32.5 cc. The I.C.H. score⁶ was 2/6 and the FUNC score⁷ was 8/11, which were

interpreted as 26% risk of 30-day mortality and only 48% chance of achieving functional independence at 90-days post-stroke. Figure 1

The NIH Stroke Scale⁸ was administered to the patient, with him scoring 0/42. This was interpreted as indicator of no stroke symptoms, which was in stark contrast to the I.C.H. and FUNC scores.

Despite this, in view of the radiological findings patient was referred to the Department of Neurosurgery. Blood-panel reports received later showed deranged liver enzymes. Patient was managed conservatively using mannitol, antibiotics, antiemetics and hepato-protectants. Irritability was controlled using Haloperidol.⁹ Prophylactic antiepileptics were also started. Patient was discharged on the 6th day after admission as in-patient. Due to financial constraints a follow-up C.T. scan on discharge could not be performed.

On next visit, patient was admitted under the Department of Psychiatry. Blood-panel investigations were repeated, which showed improvement in liver function. Incidence of urinary incontinence had drastically reduced in frequency (limited to during sleep). No major fresh complaints were noted. Patient was started on Acamprosate¹⁰ for maintenance of abstinence.

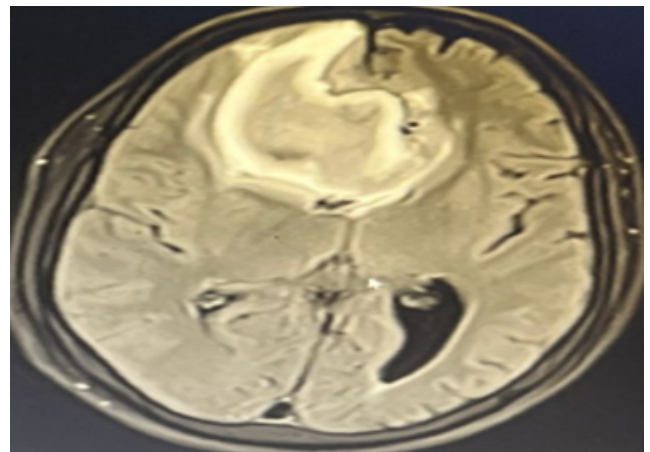


Figure 1: On M.R.I. a lesion was visualized involving the right frontal lobe, which was extending to the left frontal lobe and also compressing on lateral ventricles.

3. Discussion

Through this case report we have tried to highlight the fact that “Silent Cerebral Hemorrhage” can present as a curve-ball for clinicians and psychiatrists. Hence, it becomes imperative for us to be vigilant about it in our clinical practice. The dichotomy in interpretation of stroke-related scales may cause a dilemma about the course of management. In this case, the absence of neurological deficits was indeed a stroke of luck for the patient.

4. Source of Funding

None.

5. Conflict of Interest

None.

6. Acknowledgement

The authors would like to acknowledge the contribution of the Department of Radiology and Department of Neurosurgery of the institution towards making this case-report possible.

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Cite this article: Tripathi UK, Paul A, Kaur S, Chakladar A, Alphonse AM. Dichotomous interpretations and a stroke of luck: A case of silent cerebral hemorrhage. *IP Indian J Neurosci* 2023;9(4):231-233.