



REVIEWER'S REPORT

Manuscript No.: IJAR-50498

Date: 04-03-2025

Title: HbA1c in the risk prediction of ischemic stroke and transient ischemic attacks

Recommendation:

- Accept as it is.....**YES**.....
- Accept after minor revision.....
- Accept after major revision
- Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality	√			
Techn. Quality		√		
Clarity		√		
Significance			√	

Reviewer's Name: Dr Aamina

Reviewer's Decision about Paper: **Recommended for Publication.**

Comments (*Use additional pages, if required*)

.

Reviewer's Comment / Report

Overall Assessment

The study provides an in-depth analysis of the role of glycosylated hemoglobin (HbA1C) in predicting the risk of ischemic stroke and transient ischemic attacks (TIA). It effectively highlights the correlation between hyperglycemia and cerebrovascular events, particularly in patients with diabetes mellitus. The research is methodically structured, covering epidemiological background, methodology, results, and conclusions with clarity. The inclusion of statistical data and patient distribution enhances the comprehensiveness of the findings.

REVIEWER'S REPORT

Abstract Review

The abstract succinctly introduces the study's background, objectives, methodology, and key findings. It clearly states the significance of hyperglycemia in stroke risk and presents statistical evidence supporting the association between HbA1C levels and cerebrovascular events. The inclusion of specific percentages for TIA and ischemic stroke patients strengthens the study's credibility. The conclusion emphasizes the importance of maintaining HbA1C levels below 7% to prevent stroke, aligning with the study's primary aim.

Introduction Review

The introduction provides a strong foundation for the research by outlining the prevalence and impact of stroke worldwide. It effectively connects diabetes mellitus as a critical risk factor and presents relevant epidemiological data, including findings from the Framingham Study. The discussion on microvascular and macrovascular complications adds depth to the understanding of how chronic hyperglycemia contributes to cerebrovascular pathology. The rationale for using HbA1C as a marker for long-term glycemic control in stroke patients is well-articulated, reinforcing the study's significance.

Materials and Methods Review

The methodology is clearly defined, specifying the study setting, sample size, inclusion, and exclusion criteria. The choice of King George Hospital as the study site provides a structured clinical setting for data collection. The criteria for patient selection ensure that the study focuses on ischemic stroke and TIA cases while excluding confounding conditions such as hemorrhagic stroke and stroke mimickers. The use of CT and MRI for diagnostic confirmation adds to the study's reliability. The systematic approach to measuring HbA1C and random blood sugar (RBS) at admission allows for an accurate comparison of glycemic markers.

Results Review

The results are well-organized and presented with statistical clarity. The study effectively quantifies the prevalence of elevated HbA1C levels in both ischemic stroke and TIA patients. The breakdown of HbA1C levels among different patient subgroups—those with and without known diabetes—provides valuable insights into the role of previously unrecognized hyperglycemia in stroke risk. The numerical findings demonstrate a strong correlation between

REVIEWER'S REPORT

poor glycemic control and cerebrovascular events. The graphical representation further enhances the clarity of the data.

Conclusion Review

The conclusion effectively summarizes the key findings, reiterating the significance of hyperglycemia as a major risk factor for stroke. It reinforces the role of HbA1C as a more reliable indicator of glycemic status compared to RBS at admission. The recommendation to maintain HbA1C levels below 7% in diabetic patients aligns with established clinical guidelines and emphasizes the importance of long-term glycemic control in stroke prevention.

Key Strengths

- **Comprehensive Epidemiological Background:** The study provides a well-supported discussion on the link between diabetes and stroke risk.
- **Clearly Defined Methodology:** The inclusion and exclusion criteria are well-structured, ensuring a focused study population.
- **Strong Statistical Presentation:** The use of percentages and patient distribution enhances the clarity of findings.
- **Clinical Relevance:** The study addresses a crucial aspect of stroke prevention, emphasizing the importance of glycemic control.
- **Use of Reliable Diagnostic Methods:** The confirmation of stroke through CT and MRI enhances the accuracy of the research.