Pre-hospital Delay and Patient Knowledge in Acute Cerebrovascular Accidents at Kenyatta National Hospital

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Abstract

Background: Stroke is a leading cause of death and disability worldwide. In Kenya, stroke is the third leading cause of death, and the burden of the disease is increasing due to the aging population and the increasing prevalence of risk factors such as hypertension, diabetes, and smoking. Pre-hospital delay is a major contributor to poor outcomes in stroke patients. Knowledge about stroke and its symptoms is essential in reducing pre-hospital delay and improving outcomes in stroke patients.

Objectives: The main objective of this study was to investigate the factors influencing pre-hospital delay of acute stroke patients at Kenyatta National Hospital by the end of 2022 using a cross section survey of 50 patients, to identify the main influencers of presentation time including patient and community factors, healthcare system factors and stroke related factors.

Methods: This was a cross-sectional study involving 50 acute stroke patients who presented to neurology ward (7B) and Intensive Care Units (ICU) at Kenyatta National Hospital after random sampling. Data was collected using a structured questionnaire. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 24. Univariate analysis was conducted using student t-test or the Wilcoxon –Mann-Whiney test for continuous variables and using Chi-square or Fisher's exact test for categorical variables for the subgroup analyses such as comparison between patient arrival at first hospital within 4.5 hours and after 4.5 hours. The results were presented in the form of tables.

Results: The study involved predominantly female patients (62%), married (62%) and had NHIF hospital cost coverage. The majority of patients were non-smokers, had no history of stroke, patients' families had no history of stroke. The median time interval was approximately 4.25 hours. The majority of the patients (66%) had poor knowledge on stroke risk factors and stroke warning signs and symptoms (62%). Certain social demographic factors, such as age, education, and marital status, were associated with the timing of patient presentations to the hospital. The study found that patients with better knowledge of warning symptoms were more likely to present to the hospital on time, while there was no significant association between knowledge of stroke risk factors and timely presentation.

Conclusion: Most of the patients managed to arrive at the hospital on time. The study highlights a concerning gap in knowledge regarding stroke risk factors and warning signs. Certain social demographic factors (age, education, and marital status) exhibited statistically significant associations with timely hospital presentation. Knowledge concerning warning symptoms had significant associations with the timing of hospital presentations. The study did not establish a significant link between knowledge of stroke risk factors and the timing of patient presentations.

Key words: Median time interval, Knowledge of stroke, Delays in the presentation, Acute stroke