Post-stroke care: an alternative model to reduce stroke related morbidity in sub-Saharan Africa

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Abstract: Stroke is a leading cause of death and disability in adults in sub-Saharan Africa (SSA). Despite its considerable burden, there has been limited progress to properly cater for and rehabilitate stroke survivors. Scarcity of rehabilitation services and grossly inadequate skilled personnel for post stroke care are distressing realities for stroke victims in SSA. There is growing evidence suggesting that home-based rehabilitation for stroke can have functional outcomes similar to patients who receive inpatient neuro-rehabilitation. The acute phase of treatment during hospitalization could be an opportunity to educate families and caregivers on how to care for stroke victims at home and provide home-based rehabilitation and care tailored to their disability. Interventions to vulgarize home-based post-stroke care could be more acceptable, affordable and accessible for victims and families. This could go a long way to palliate to the scarcity of rehabilitation services and reduce stroke related morbidity. We suggest that further research be carried out to ascertain the feasibility of this model in SSA settings, with greater emphasis on the cost effectiveness and sustainability arms of such an intervention.

Keywords: Post-stroke care; home-based rehabilitation; task shifting; sub-Saharan Africa (SSA)

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Introduction

Stroke is a major health problem worldwide. It accounts for more than 10% of deaths and represents the second cause of acquired adult long-term neurological disability (1-3). The burden of stroke is, however unevenly distributed with more than two thirds of all stroke deaths occurring in low and middle income countries, including sub-Saharan Africa (SSA) (1-3).

The huge progress made in the care and rehabilitation of stroke victims has not benefited SSA with virtually no existing stroke units in the region for acute stroke care (4). Also, there is growing evidence that the post-hospital management of stroke in SSA is inadequate (5,6). The inadequacy between the projected increase in stroke incidence and limited resources for care is an ingredient for a rise in stroke mortality and distressing increased morbidity. Task shifting to caregivers and families in post-hospital stroke management could be an attractive alternative to palliate to the scarcity of post-stroke rehabilitation facilities and management in SSA.

Discussion

The incidence and burden of stroke in SSA are likely to rise due to the current health and socio-demographic transition SSA is going through. The health transition implies an increase in the burden of non communicable diseases including cardiovascular diseases and stroke which will initially add to the already devastating impact of infectious diseases and later on become the major cause of death and disability in this part of the world (2). A recent report from an urban reference medical unit in Cameroon showed significant increase in stroke admission and case fatality (7). Despite this considerable stroke burden, care

and rehabilitation of stroke victims has been limited (6), with most patients directly discharged home after the acute stroke management. Victims are generally not prepared on what do. Knowledge gaps and inadequate resources to pay regular visits to specialized care centres could predispose these victims to incur some preventable post stroke related consequences. Empowering patients and families on home based evidence based practices that offer similar gains like standard inhospital care could be cost saving and potentially more convenient, acceptable and sustainable in economically challenged regions as such.

The effects of stroke range in severity from minor disabilities that may resolve rapidly to severe and long lasting disabilities. These effects include physical disabilities, psychosocial and cognitive impairments (8). Many of these disabilities improve substantially if the affected individual receives specialized rehabilitation which usually begins in the acute care setting and results in improved long-term outcome for the stroke survivor (8). In developed countries, admission to specialized in-patient rehabilitation facilities is the norm, where the factors that improve the outcome of rehabilitation are more readily available (9,10). In contrast to developing countries including SSA, there is scarcity of specialized rehabilitation facilities and limited personnel. After the acute inpatient stroke management, patients are usually sent home directly, and the burden of care of the stroke survivor is often placed on their families and care givers.

In most developed countries, stroke care begins in the inpatient hospital setting and upon discharge, stroke survivors continue to receive ongoing rehabilitation in the hospital based outpatient setting. In recent years, home-based rehabilitation has gained substantial support as a feasible option for delivery of specialized stroke care after discharge from hospital. This type of care is often directed at individuals who have ongoing rehabilitation needs and for whom traditional hospital-based outpatient rehabilitation services are scarce, not accessible or as an alternative to traditional facility-based outpatient services. Several randomized controlled trials have provided evidence for the effectiveness of home-based stroke rehabilitation (11-16). These trials have concluded that home based rehabilitation following stroke is feasible, acceptable to patients, and as effective as routine care and rehabilitation, with home based rehabilitation for stroke offering clinical outcomes similar to patients who receive inpatient routine rehabilitation (17-19). Most African communities still value and depend on close social and family networks to deal with chronic conditions and disabilities. Task-shifting to family members and care givers sounds as an attractive alternative in resource limited settings like SSA. During the acute management of stroke victims in the hospital, stroke education programs could be offered to care givers and families in resource limited settings like SSA to palliate the inadequacy of post-hospital stroke management due to the scarcity of inpatient rehabilitation facilities and personnel. In SSA African settings, the majority of stroke survivors who receive inpatient rehabilitation do so in the ward or in the hospital rehabilitation units after which they are directly discharged home with most still requiring ongoing rehabilitation. The aim of this task shifting should not be to replace the role of a physiotherapist or standard specialize medical care when need be. Evidence has also shown that a home based rehabilitation scheme is less costly than conventional hospital care for stroke survivors (20). Task shifting of post-stroke care to families and caregivers in resource limited settings could go a long way reduce length of hospital stay contributing to reducing cost (20). It can also go a long way to improve clinical outcome as with conventional home-based stroke rehabilitation (18,19).

Conclusions

Although the burden of stroke is high in SSA, post-stroke care is largely inadequate due to scarcity of resources. Task shifting to care givers and families could be an attractive alternative in post-stroke care. This alternative must however be considered with caution with regards to properly identifying, and on time, the needs of the patients that require specialized care. We suggest that further research to ascertain the feasibility of this model in Sub-Saharan Africa settings, with greater emphasis on the cost effectiveness and sustainability arms of such an intervention be carried out.

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None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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