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Research Article

**AN OVERVIEW OF STROKE EARLY MANAGEMENT
APPROACH NURSING CARE****¹ANWAR MAKKI IBRAHIM SHARIAH, ²AMIN SALEM SLKHATTABI, ³AWAD
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ABDULKHALIQ SHAKER, ⁶ABDULRAHMAN SAEED SAAD ALSAEDI****Article Received:** November 2021 **Accepted:** December 2021 **Published:** January 2022**Abstract:**

Stroke is a major cause of disability worldwide. Majority of the medicare patients discharged from the hospital after stroke, return directly home, some are discharged to inpatient rehabilitation facilities, and others are discharged to skilled nursing facilities. Therefore, The nurses should care throughout the stroke patient's hospitalization, from triage in the A&E to discharge from the rehabilitation ward, have a vital role in caring, treating, and training stroke patients. They can also help their families to understand the course of the condition, its limitations and provide a realistic trajectory of improvement and recovery. The participants emphasize the role of supervision and control in facilitating the educational performance of nurses. The efficiency of staff activities in each organization is for the greatest part dependent on how much they are supervised. Proper supervision promotes and improves the work. The head nurse during the action research encouraged the nurses to change the existing situation and gave them a change to promote their profession by providing opportunities to improve their performance.

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INTRODUCTION:

Stroke is a significant and increasing health issue. World Health Organisation data shows that 15 million people worldwide suffer a stroke every year. Of these, five million people die from stroke and five million people are left with permanent disability placing a burden on families and communities [1]. Awareness and modification of risk factors such as hypertension and smoking has resulted in a reduction in the incidence however the absolute number of strokes continues to rise as a result of ageing populations and increased life expectancy [1]. An important part of acute stroke management and decreasing stroke-related mortality is preventing complications within the first 24 - 48 hours [2,3]. The current climate of prolonged time spent in the Emergency Department (ED) means that many aspects of stroke management are now the responsibility of emergency nurses.

There are also a number of personality and intellectual changes, ranging from difficulty in controlling emotions and lack of self-confidence, to severe depression. Also, difficulties in communicating and understanding are quite common among stroke patients [4].

Generally, nursing interventions during the acute stages following a stroke aim at preventing secondary brain injury (intracranial hypertension), maintaining the airways (due to paralysis of the pharynx muscles), providing general body support (vital signs, fluid and electrolyte balance), and anticipating the occurrence of complications (atelectasis and pneumonia). Stroke is the third leading cause of death and an important cause of hospital admission and long-term disability in all industrialized populations [5].

Treatment of acute ischemic stroke (AIS) consists of a multidisciplinary approach that more than ever requires the involvement of the critical care specialist. Before the 1990s, treatment options for AIS were limited and mainly focused on symptomatic management, secondary prevention, and rehabilitation. Since then, the entire field was revolutionized by two major introductions. The first ground-breaking innovation that dramatically transformed acute stroke care on the basis of a National Institutes of Neurological Disease and Stroke (NINDS) landmark study was the Federal Drug Administration's (FDA) approval of IV tissue plasminogen activator (IV-tPA) in 1995 [6,7].

DISCUSSION:

Generally, nursing interventions during the acute stages following a stroke aim at preventing secondary

brain injury (intracranial hypertension), maintaining the airways (due to paralysis of the pharynx muscles), providing general body support (vital signs, fluid and electrolyte balance), and anticipating the occurrence of complications (atelectasis and pneumonia). Stroke is the third leading cause of death and an important cause of hospital admission and long-term disability in all industrialized populations [8].

The nurse has many opportunities and interventions with which to facilitate rehabilitation for the patient with a stroke. The most effective interventions are those related to helping the patient become as independent as possible and to increasing feelings of self-worth and dignity, which in turn has a positive impact on the resocialization of the patient in the family and community [8,9].

During the acute stroke phase, preventing an increase in intracranial pressure (ICP) is imperative. Indeed, poststroke elevated ICP in patients with large brain infarcts is a critical part of acute stroke therapy and can be lifesaving. ICP can be usually observed up to the first four days after ischemic infarcts. The indications are usually a rapid decline in consciousness and the development of brain herniation signs [9]. ICP management involves the use of hyperosmolar agents such as mannitol and hypertonic saline which form a relatively hypertonic intravascular space, promoting osmotic flow outward from the brain parenchyma. Hypertension in the acute stroke phase is a frequent clinical finding as it is documented in approximately 80% of patients, including those without a history of hypertension. Moreover, increased blood pressure (BP) is both a main risk factor and a main finding during acute stroke. Thus, routine nursing interventions during the acute phase of an ischemic thromboembolic stroke also include the maintenance of normotensive BP without the use of hypotensive drugs unless systolic BP (SBP) is over 220 mm Hg or diastolic BP, above 120 mm Hg [10]. Nursing staff in stroke care should be alert for severe arterial hypertension as this can aggravate cerebral edema and contribute to a hemorrhagic transformation of the infarcted stroke area. However, evidence over the past 30 years has shown that an elevated BP on stroke occurrence usually tends to decline automatically over the first 48–72 hours after an acute ischemic event [11].

EARLY DETECTION OF STROKE:

Ischemic stroke can occur both in the community and in the hospital and must be recognized by bystanders and/or providers. Early recognition activates a stroke-specific chain of survival (**Table 1**) [12]. Stroke is a

clinical diagnosis and several features of the patient's clinical presentation can be used to identify stroke patients (**Table 2**) [13]. Emergency Medical Systems

are key in detection, triaging, and transport of stroke patients to receiving facilities.

Table 1: The 8 D's of Stroke Care

Detection: Involves recognizing the signs and symptoms of an acute stroke (BEFAST, Table 2)
Dispatch: Activation of emergency medical services. In most cases, this involves calling 911 or a stroke team
Delivery: Means prompt transport of the patient to a hospital, preferably a stroke center or to a setting in the hospital for further evaluation by a stroke team
Door: This refers to the arrival of the patient at the ED. According to recommendations from the National Institute of Neurological Disorders and Stroke, an assessment should be completed by an ED physician within 10 min of arriving in the ED
Data: Data collection includes results from laboratory tests and both a physical and a neurologic examination (Neurological Institutes of Health Stroke Scale)
Decision: Information, such as the type of stroke, last seen normal, and time from onset of symptoms, is considered before a treatment decision is made
Drug/device: Fibrinolytic therapy should be administered within 4.5 hr of the onset of symptoms. Even if the patient is not a candidate for fibrinolysis, they may still qualify for endovascular therapy to remove mechanically a clot
Disposition: It is recommended that patients are admitted to an ICU or stroke unit within 3 hr of arrival in the ED

A stroke team including nurses can provide around the clock services for patients with stroke. Such team consists of physicians with expertise in emergency medicine, vascular neurology/neurosurgery, and radiologists; advance care providers, nurses, clinical pharmacists, therapists, and technicians; and laboratory personnel [14]. In the ED, the efficiency and accuracy of recognition of stroke syndromes can be performed with telemedicine. In the Stroke Team Remote Evaluation Using a Digital Observation Camera (STRoKE-DOC) study, two-way audiovisual

consultation was superior to telephone-based consultation in accurately identifying stroke patients, yielding a higher rate of IV-tPA administration with similar proportion in ICH but without effect on overall functional outcome [5,14]. In the new era of recanalization for AIS with LVO [15], telemedicine systems have assisted in improving the recognition of stroke patients in need of endovascular therapies yielding to better functional outcomes and quality of life [16].

Table 2: BEFAST, Detection of Stroke

Balance, acute or sudden onset of loss of balance or coordination
Eyes, blurred or unclear vision, double vision, and gaze preference
Facial weakness or facial asymmetry
Arm and/or leg weakness
Speech difficulty/slurring of speech
Time is brain, time to activate stroke system and stroke clock

Stroke education should be proportionate to the significance of stroke as a major health issue in individual countries and that creative evaluative educational interventions for nurses should be introduced. Stroke nurses need to be vigilant with their updating of Evidence Based Practice as ongoing research in the field illuminates greater insights into improved management skills often of particular

relevance to their professional standing. Although there is today a well-established and effective treatment for thromboembolic stroke in its acute phase which is recombinant tissue plasminogen activator, this is limited due to a narrow time window between the onset of symptoms and the initiation of treatment, it is resource intensive and, for some, potentially hazardous.14 Despite these shortcomings, increasing

the access to treatment is beneficial not only to individuals but also it is expected to be beneficial to society in general because of less disability and improved quality of life for surviving patients. Decreased health care expenditure also arises due to increased patient independence. It is acknowledged that strategies to increase public awareness of stroke and the need for urgent transportation to hospital should be promoted.

CONCLUSION:

Emergency nurses play a key role in acute stroke care and the role of ED staff in stroke care will expand as the burden of disease related to stroke results in increased service demand. Further, increased emergency demand and decreased access to inpatient beds may further increase the time patients spend in ED following acute stroke making emergency nursing management of acute stroke a fundamental factor in optimising patient outcomes following stroke. The results of this study have shown that an evidence-based guideline can improve stroke care in the ED and decrease clinical risk associated with acute stroke. However, prevention and maintenance constitute a large part of the nurse's role in caring for the stroke patient during the acute stage of his illness. The nurse must have knowledge of both the subjective and objective effects of a stroke to formulate an effective Nursing Care Plan. Consistency is vital in providing an environment in which a stroke patient can relearn fundamental activities. Confusion, and thus the diminished ability to learn, is often relieved by familiarity and predictability of surroundings, persons, and routines. Nursing's participation in positioning, range of motion exercises, bowel and bladder retraining and providing appropriate sensory input is essential. The nurse must assume the role of coordinator and evaluator of the patient's rehabilitation, using 24 hour-a-day observation coupled with educational background and experience, to determine obstacles and assess the patient's ability to resume living in his previous environment.

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