MAKERERE UNIVERSITY

COLLEGE OF HEALTH SCIENCES

PREVALENCE AND PATTERNS OF MUSCULOSKELETAL DEFORMITIES IN ADULT STROKE PATIENTS AT MULAGO HOSPITAL

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS OF MEDICINE IN ORTHOPAEDIC SURGERY OF MAKERERE UNIVERSITY, KAMPALA

ABSTRACT

Introduction

Musculoskeletal deformities following stroke cause significant disability among stroke survivors. Deformities such as equinovarus, claw toes, etc. are amenable to surgical correction resulting in improved functional outcome. The burden of stroke at Mulago Hospital is high and accounts for a high proportion of in-patient admissions and out-patient consultations. A number of these patients present with musculoskeletal deformities. However, the prevalence and patterns of musculoskeletal deformities following stroke have hitherto not been documented, resulting in challenges in their management.

Study objective

The objective of the study was to establish the prevalence, patterns and factors associated with musculoskeletal deformities occurring in stroke patients.

Methods

This was a descriptive cross-sectional study, carried out at Mulago Hospital in stroke patients admitted to the neurology ward, and attending the neurology clinic and physiotherapy department. A total of 105 patients were enrolled. Data on demographics, relevant history and physical examination was obtained and recorded using a questionnaire, following approval from the research ethics committee.

Results

The study found the prevalence of musculoskeletal deformity to be high at 74.3%. Of the participants, 67.95% had both upper and lower limbs affected, 24.365 had upper limb only affected and only 7.69% had lower limb only affected. The study found that the commonest musculoskeletal deformity was shoulder stiffness, occurring in 70.5% of participants and the least common were claw toes, elbow extension and forearm supination, occurring in 1.28% of participants. Other musculoskeletal deformities included; forearm pronation(48.7%), elbow flexion(43.6%), thumb-in-palm(35.9%),wrist flexion(34.6%), clenched fist(16.7%), shoulder subluxation(11.5%), hip adduction(30.8%), equinovarus(24.4%), equinus(23.1%), knee flexion(12.8%), varus(12.8%) hip flexion(6.4%) and knee extension(2.25%). The main factor associated with musculoskeletal deformities was age above 60 years (*p* value 0.02, OR 3.27, 95%CI 1.17-9.19).

Conclusion

Stroke is associated with a high burden of musculoskeletal deformities in our setting. These musculoskeletal deformities are diverse and involve both upper and lower limbs, with the upper limb affected more. Stroke patients above the age of 60 years are at an increased risk of developing musculoskeletal deformities.