



MAKERERE UNIVERSITY

**PREVALENCE AND PATTERNS OF DEEP VENOUS
THROMBOSIS IN PATIENTS WITH ACUTE TRAUMATIC
SPINAL CORD INJURY AT MULAGO HOSPITAL**

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*DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTERS OF MEDICINE IN
ORTHOPAEDIC SURGERY OF MAKERERE UNIVERSITY*

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ABSTRACT

Background: Spinal cord injured patients are at high risk of developing DVT. This is because spinal cord injury favours two of the Virchow's triad of factors for DVT; thus endothelial injury (trauma) and immobility (venous stasis). DVT has long been known to be a major health problem in the West. However, the problem in Africa has been underestimated due to lack of data.

Objective: The objective of this study was to establish the prevalence and to describe the patterns of DVT in patients with acute traumatic spinal cord injury at Mulago hospital.

Study methodology: This was a prospective cross sectional study carried out at the spine unit of Mulago national referral and teaching hospital. Fifty three patients were purposively recruited into the study and screened for DVT using the model developed by Wells and colleagues. This included clinical assessment, D-dimer assay and Doppler sonography. Data collected was entered into EpiData version 3.1 and analyzed using STATA version 10.1 (Copyright 1985-2011 Stata Corp LP, Texas, USA)

Results: Out of 53 patients enrolled in the study, 48 were males and 5 were females. Most of the patients were in the age group of 21 to 40 years. DVT was found in 6 out of 53 patients representing 11.3%. All the patients who had DVT were in ASIA class A. There was bilateral involvement in 1 patient whereas 2 patients had thrombi in the left and 3 had thrombi in the right. A total of ten different thrombi were found, 3 proximal and 7 distal. Clinical signs were found to be unreliable in the diagnosis of DVT in spinal cord injured patients. D-dimer test in combination with the Wells score was found to be a useful screening test and could reduce the need for further test if negative.

Conclusion: The prevalence of DVT in patients with acute traumatic spinal cord injury at Mulago hospital was 11.3%. This prevalence was comparable to studies done in Asia but within the lower border of studies done in Caucasians. Distal DVT was more common as opposed to Caucasians where proximal DVT is more common. Clinical features of DVT were found to be unreliable in spinal cord injured patients due to the neurological injury.