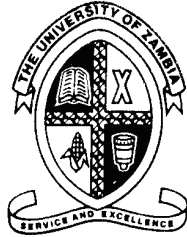


UNIVERSITY OF ZAMBIA, SCHOOL OF MEDICINE



A Study to Determine the Prevalence of Trauma Cases and Adoption of the Kampala Trauma Score at the University Teaching Hospital, Lusaka

by

Rae Oranmore-Brown

A Dissertation submitted in partial Fulfilment of the Requirement for the award of the degree of Master of Medicine (Surgery) of the University of Zambia

LUSAKA

2013

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Declaration

I hereby declare that this dissertation is my own work. This has not been submitted for a degree, diploma or other qualification at this or any other university.

Signed:

R Oranmore-Brown

Certificate of Approval

This dissertation of Rae Oranmore-Brown has been approved as partial fulfilment of the requirements for the award of Masters in Medicine Degree in General Surgery by the University of Zambia

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Date:

ABSTRACT: Trauma in Lusaka, Zambia by Rae Oranmore-Brown

Background: Trauma is a global problem and the leading cause of death in low and middle-income countries (LMICs). The trauma registry is considered to be a vital component of a trauma system; there is good evidence that organised trauma care systems decrease deaths. No trauma registry exists in Zambia. Trauma scoring systems are routinely used in conjunction with trauma registries, as a measure of injury severity and as a predictor of mortality. The revised Kampala Trauma Score (KTS II) has been piloted as an appropriate alternative trauma scoring system in various LMICs; it has not been used in Zambia before this study.

Method: A prospective, cross-sectional observational study was conducted from September to February 2012 of patients presenting with injuries to the University Teaching Hospital (UTH). The aim of the study was to develop a template for a trauma registry, define the epidemiology of trauma and define clinically measurable risk factors for mortality (using the KTS II) at UTH. Data was collected on injured patients 24 hours/day including: circumstances of trauma, transport method and time, injury type and location, vital signs on arrival and disposition. A KTS II score was calculated for each patient. Basic demographic data, time of injury to presentation and alcohol use were recorded. Length of stay, operations, use of blood products, radiological services and primary diagnosis were also noted. Data was analysed using descriptive statistics and the KTS II validated by calculating area under the receiver operating characteristic curves.

Results: 3425 patients were captured in the study: 72% were male, 28% female. The top three causes of trauma were found to be falls, road traffic accidents and assault. The highest number of trauma victims were children (0-11years) [27%], followed by the 31-50 year old group (26%), followed by the 21-30 year old group (25%). Alcohol abuse was linked to assault and pedestrian traffic accidents. Less than 25% of patients arrived within an hour of injury; the most common form of transport to the hospital was private car (53%), followed by public transport (38%), followed by public ambulance (6%). 54% of road traffic victims were pedestrians, with 85% non-drivers. Nearly half of presenting trauma patients were admitted; the most common injury requiring admission was fracture, followed by lacerations and then burns. The mortality rate for the admitted data set was 4.1%. The highest mortality was sustained by the burns patients (43%); followed by road traffic victims (36.5%), then assault patients (24%). The KTS II was found to be a reliable predictor of mortality (P value <0.0001), but a poor predictor of length of hospital stay.

Conclusions: The epidemiology of trauma for injured patients presenting to UTH was defined. A surprise finding was the high number of falls. Public health education priorities and the need for a trauma care system, including pre-hospital care and a re-organisation of trauma care within the hospital were identified. The hospital would benefit from a trauma registry system with an embedded scoring method such as the KTS II to define injury severity and predict mortality.

Keywords: Trauma registry; KTS II; Trauma system; Developing country; LMICs; Africa

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Dedication

First: to God, Creator and Jesus, Saviour

Second: to Craig, best friend, love of my life and my family

Third: to the trauma patients. May this be a tiny step towards alleviating suffering
and disability