

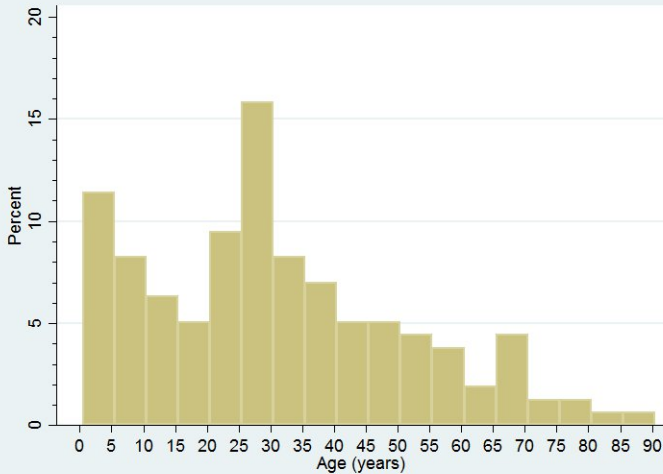
Traumatic Brain Injury at a Tanzanian Tertiary Care Center: a Cross-Sectional Study

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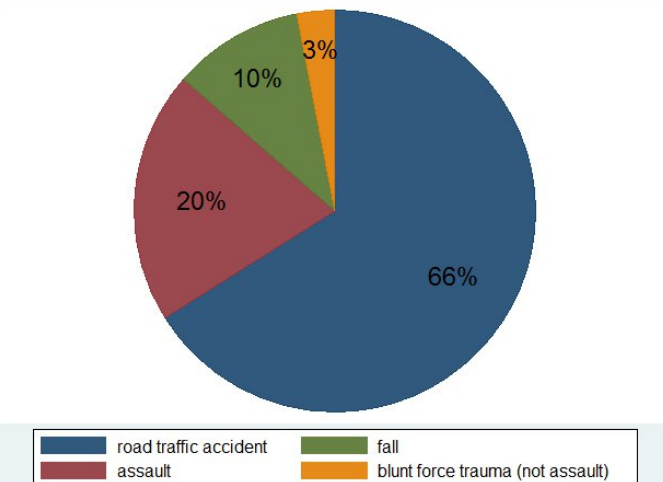
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Age Distribution of Patients with TBI



Young men between 20-30 years of age had the highest frequency of TBI.

Cause of Injury



The most common cause of TBI was road traffic accidents, which accounted for 66.1% of cases.

Introduction

Traumatic Brain Injury (TBI) is the number one reason for death and disability in young adults worldwide. Accurate TBI data from sub-Saharan Africa are lacking. We describe TBI mortality at a Tanzanian referral hospital.

Methods

Patients with TBI admitted to the intensive care unit and to any ward were followed for 14 days or until discharge. The primary outcome was mortality. Univariate logistic regression was used to determine factors associated with death.

Results

Between September 2013 and March 2015, 162 patients were enrolled. The majority were male (84%). The most common cause of injury was road traffic accidents (66.1%). The median age was 28 years [IQR 15--42] for males and 38 years [IQR 25--50] for females. Severe TBI (GCS<9) occurred in 47%, moderate in 22%, and mild in 31% of patients. Of severe TBI 25% were admitted to the ICU. CT imaging was performed in 53% of all patients and 55.3% of patients with severe TBI. Neither intracranial pressure nor continuous blood pressure monitoring were available for any patient. Craniotomy was performed in 39.0%. Mortality for all TBI patients was 24% and 36.8% for severe TBI. The GCS of patients alive at discharge was 13.8 (+/-2.0). Low GCS, abnormal pupils, and mechanical ventilation were associated with higher mortality.

Conclusions

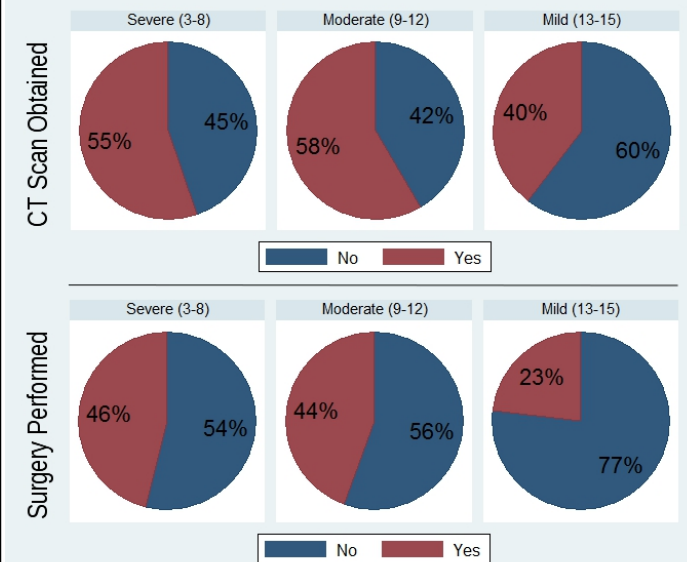
TBI predominantly affects young males in Tanzania and mortality is more than twice that in developed countries. Our data indicate that routine ICU care, CT imaging, and ICP/blood pressure monitoring are underutilized or unavailable. This may contribute to the high mortality of severe TBI patients in Tanzania. We are therefore working to increase access to these interventions in order to improve outcomes.

Learning Objectives

By the end of this session, participants should be able to:

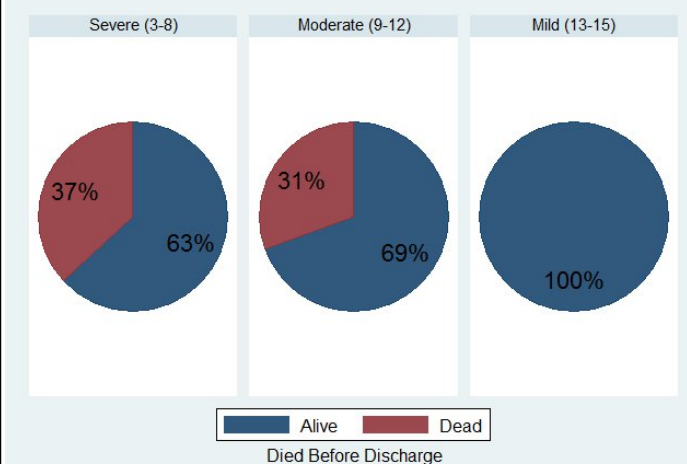
- Describe the importance of traumatic brain injury as a global health problem
- Discuss in small groups the essential package of interventions necessary and available to care for patients with traumatic brain injury in a low-resource setting
- Identify the need for significant investment in traumatic brain injury treatment to decreased worldwide therapy

Interventions Based on GCS



Patients with severe TBI were more likely than those with mild TBI to undergo CT scan or surgery.

Mortality Rate Based on GCS



Lower GCS score was significantly associated with an increased risk of mortality.