

MAKERERE



UNIVERSITY

COLLEGE OF HEALTH SCIENCES

**PREVALENCE AND PATTERNS OF TRAUMATIC BONE LOSS FOLLOWING
OPEN LONG BONE FRACTURES AT MULAGO HOSPITAL.**

BY

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ABSTRACT

Introduction: Significant traumatic bone loss occurs in a high proportion of open fractures ranging from 11.4% to 40% in developed countries.^{2,3} However, there is no documented literature concerning the prevalence and patterns of traumatic bone loss following open long bone fractures among patients in developing countries such as Uganda. Direct trauma and iatrogenic factors have been suggested to play a role in etiology, while the diagnosis is mainly clinical and plain radiographs give adequate information about the extent of bone loss in most cases.

Objective: The study was aimed at establishing the prevalence and patterns of traumatic bone loss following open long bone fractures of the limbs, and identifying factors associated with traumatic bone loss among patients presenting to Mulago hospital.

Methodology: It was a cross-sectional study conducted at Mulago National Referral Hospital, Accident and Emergency unit and 3B emergency surgical ward. A total of 386 open long bone fractures were registered and physically examined for traumatic bone loss among patients who consented and were recruited consecutively to participate in the study. Data on the patients' socio-demographics and fracture patterns was collected using pretested questionnaires and analysed using Stata version 12. Results were summarized as frequency tables, bar graphs and text. They were discussed.

Results: A total of 386 open long bone fractures were registered in 159 patients who consented and participated in the study. The prevalence of traumatic bone loss following open long bone fractures at Mulago hospital was 38.6%. The male to female ratio was 5:1. Significant traumatic bone loss was the most common pattern in this study (52.3%).

Gunshot injuries were the leading cause of traumatic bone loss in open long bone fractures (OR: 7.73; 95% CI: 1.725-34.624; p=0.008).

Conclusion: The prevalence of traumatic bone loss following open long bone fractures was high in this study. The majority of cases had significant traumatic bone loss (bone loss ≥ 2.5 cm). Young adult males in their economically productive age group were mostly affected. Gunshot injuries were the most common cause of injury followed by road traffic accidents.

Recommendation: There is need to increase awareness among health professionals to have a high index of suspicion and assess every patient who presents with an open fracture for traumatic bone loss so that early detection and prompt appropriate treatment are effected.