

**COMPLICATIONS AND ASSOCIATED FACTORS AMONG PATIENTS WITH
OPEN LONG BONE FRACTURES DISCHARGED WITH EXTERNAL
FIXATORS FROM MULAGO HOSPITAL**

BY

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DECLARATION

I hereby declare that this study is my original work. Unless otherwise stated the views and opinions expressed are mine. This study in full or otherwise has not been submitted for publication anywhere neither has it been submitted for the award of any degree in any other University.

Signed:

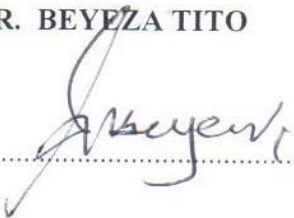
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DEDICATION

This book is dedicated to:

My parents Mr. Anguyo Pariyo and Betty Pariyo who sacrificed so much to have their children receive a good education.

My Brother Anthony Pariyo who encouraged me so much as I pursued this degree.

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MAY GOD BLESS YOU ALL

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LIST OF ACRONYMS

AP	Antero posterior
OPD	Outpatient Department
ORIF	Open Reduction and Internal Fixation
POP	Plaster Of Paris
PTB	Patella tendon bearing cast
TSF	Tailor Spatial Frame

OPERATIONAL DEFINITIONS

1. **Complication:** For purposes of this study refers to medical problem, illness or disorder associated with open fractures and external fixators arising from the time of injury to time of revisit in surgical outpatient department.
2. **Discharged patients:** Refers to patients with open fractures treated with external fixators and sent home from orthopaedic trauma ward before their wounds heal or before change of external fixators to plaster cast or internal fixation as definitive treatment.
3. **Loss of alignment:** Disruption of normal longitudinal anatomy of a long bone after achieving acceptable fracture reduction with an external fixator as seen on check x-ray.
4. **Pin loosening:** In this study means schanz pins that have become less tight within the bone as is determined by clinical examination.
5. **Pin tract infections:** Means all or any of the following: redness, swelling or pus discharge around the schanz pin and this was determined by clinical examination.
6. **Wound infection:** Means all or any of the following: redness, pus discharge and discoloration of tissues both within and at the wound margin and this was determined by clinical examination in OPD.

ABSTRACT

Introduction: Open long bone fractures are common worldwide and are associated with significant complications. Due to high numbers of patients in the Mulago orthopaedic trauma ward, the orthopaedic department came up with a policy of discharging some patients with open fractures treated with external fixators. This policy was adopted in September 2011.

The implication of this policy on complications is not known. We therefore conducted a study to assess complications and associated factors among patients being treated under this policy.

Methods: Through a cross sectional study conducted between October 2013-February 2014, 77 patients were assessed for complications at the orthopaedic outpatient clinic in Mulago Hospital. Structured questionnaires were used to capture sociodemographic, clinical and radiological data. Logistic regression was used to explore factors associated with the complications.

Results: Out of 77 patients studied 53(68.8%) had complications; wound infections were 31(40.2%), pin tract infections were 29(37.8%), loss of alignment were 14(18.2%), pin loosening 3(3.9%). At univariate analysis, frequency of dressing the wound ($p=0.03$), cigarette smoking ($p=0.06$) and marital status ($p=0.21$) appeared to be associated with complications. There was some evidence of association between complications and sex, wealth, education level and use of crutches. On multivariate analysis, the association with all factors disappeared except for cigarette smoking which remained significantly associated with complications ($p=0.0598$).

Conclusion: A very high prevalence of complications was observed among patients treated with external fixators who were discharged from Mulago hospital. Wound infection and pin-tract infection were the main complications identified and were comparable to that found in other studies in Africa and India. Loss of alignment and pin-loosening were comparably lower than found elsewhere. Therefore there is need to consider re-evaluating those at high risk of complications before discharge.