



**MAKERERE UNIVERSITY**

**COLLEGE OF HEALTH SCIENCES**

**PREVALENCE AND FACTORS ASSOCIATED WITH  
SURGICAL SITE INFECTION FOLLOWING OPEN  
REDUCTION AND INTERNAL FIXATION OF CLOSED  
FRACTURES IN CASUALTY THEATRE AT MULAGO  
HOSPITAL**

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DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTERS  
OF MEDICINE IN ORTHOPEDIC SURGERY OF MAKERERE  
UNIVERSITY, KAMPALA

2013

## ABSTRACT

**Background:** Surgical site infections in orthopedics are a nuisance to both the patient and surgeon. Despite the advances in medicine, surgical site infections have still remained a major issue even in the most ideal of settings. The casualty theatre was recently equipped to perform clean orthopedic procedures like Open Reduction and Internal Fixation of fractures as they arrive in the hospital, a process that had not been done before. Since its inception, no study has been done to ascertain the magnitude of infection and the common causative organisms causing infection following ORIF.

**Objective:** This study was carried out to determine the prevalence and factors associated with surgical site infection following ORIF done in the casualty theatre at Mulago hospital.

**Methodology:** A cross sectional analytical study involving 88 patients who underwent ORIF in the casualty theatre at Mulago hospital between 1<sup>st</sup> August 2012 to 10<sup>th</sup> February 2013 was done. These patients were followed up for 6 weeks to ascertain those who got surgical site infections. Infection was determined by the CDC classification of surgical site infection. Gram stain, culture and sensitivity to determine the causative organisms of infection and the bacterial sensitivity patterns of those organisms were done. Data was collected using a pretested coded questionnaire and analyzed by STATA 10.1.

**Results :** The results indicate that the prevalence of infection at 6 weeks was 3.4%. Staphylococcus was the organism isolated and Amoxicillin/Clavulinate was the most sensitive antibiotic. Majority of the patients that sustained infection were males and the majority of the patients recruited were between the ages of 21 – 40 years.

**Conclusions and recommendations:** The prevalence of surgical site infections following ORIF in the casualty theatre at Mulago hospital was 3.4%, this is acceptable but more effort should be made to reduce on the rate of infection and the isolated organism was Staphylococcus aureus. No particular factor was found to be associated with infection in this study. There is need to conduct a larger and longer study to assess the long-term infection rates of these patients.