

**ASSOCIATION BETWEEN ANTIBIOTIC RESISTANCE WITH DURATION OF HOSPITALISATION IN DIABETIC FOOT ULCER INPATIENT AT INTERNAL WARD IN DR. SOETOMO GENERAL HOSPITAL
2016-2018**

Abstract

BACKGROUND: Diabetic Foot Ulcer (DFU) are microvascular and macrovascular complications from diabetes and has potential pathological risks including infection, ulceration, and deep tissue damage and is associated with neurological abnormalities, peripheral arterial disease, and metabolic complications in the lower extremities. Diabetic foot injury is an infection of several pathogenic microorganisms that cause tissue damage, if the infection is not handled properly then the wound will worsen and have an impact on amputation. Those pathogenic microorganisms could be a mono-microbial infection or a poly-microbial infection and those infections could be multi-drug resistant organisms (MDRO).

OBJECTIVE: To analyse the association between antibiotic resistance and the duration of the hospitalisation in diabetic foot ulcer patient at Dr. Soetomo General Hospital.

METHOD: This study is a cohort retrospective study that reviews medical records of all diabetic patients with diabetic ulcer that was admitted into Dr. Soetomo General Hospital.

RESULT: In Dr. Soetomo General Hospital the average duration of hospitalisation is 11.48 days. The species that caused the most infection under the category of gram-positive organisms are *Enterococcus faecalis* (7.8%), *Staphylococcus aureus* (5.2%) and *Staphylococcus haemolyticus* (3.9%). In the gram-negative category of bacterial species, *Proteus mirabilis* (10.5%), *Acinetobacter baumannii* (9.8%) and *Escherichia coli ESBL* (8.5%) Patients had a high resistance towards is Cephazolin with a rate of 85.5% followed by Ampicillin with 83.2% and Tetracyclin with 82.0%. Piperacillin-tazobactam (p-value 0.045) and Ceftazidime (p-value 0.046) showed an association between antibiotic resistance and duration of hospitalisation. All patients presented with MDRO and 35 (29.7%) were poly-microbial infection

CONCLUSION: There is an association between antibiotic resistance and duration of hospitalisation for Piperacillin-tazobactam and Ceftazidime as well as 100% of patient presented with Multi-drug resistant organism. Clinicians should refer to the periodic report on dominant species found and antibiotic resistance more.

Keywords: Antibiotic resistance, Diabetic Foot Ulcer, Duration of hospitalisation