

**KAJIAN KESESUAIAN PENGGUNAAN ANTIBIOTIK DEFINITIF
DENGAN HASIL UJI KULTUR BAKTERI DAN SENSITIVITAS
ANTIBIOTIK TERHADAP *CLINICAL OUTCOME*
PADA PASIEN ULKUS DIABETIK**

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INTISARI

Latar Belakang: Infeksi ulkus diabetik memerlukan pengobatan antibiotik yang tepat. Pemilihan antibiotik harus berdasarkan uji kultur bakteri dan sensitivitas antibiotik dengan tujuan antibiotik yang diberikan sesuai dengan bakteri penyebabnya. Pemberian antibiotik yang tidak sesuai dengan hasil uji kultur bakteri dan sensitivitas antibiotik dapat menyebabkan *clinical outcome* memburuk, berpotensi terjadinya resistensi antibiotik, meningkatkan risiko amputasi, dan meningkatkan mortalitas.

Tujuan penelitian: Untuk mengetahui kesesuaian penggunaan antibiotik definitif dengan hasil uji kultur bakteri dan sensitivitas antibiotik serta untuk mengetahui hubungan kesesuaian penggunaan antibiotik definitif terhadap *clinical outcome*.

Metode Penelitian: Rancangan penelitian ini adalah observasional analitik dengan desain *cohort retrospektif*. Penelitian dilakukan di RSUD Kota Yogyakarta periode 1 Januari 2017 - 31 Desember 2020. Data penelitian diambil dari rekam medik pasien yang memenuhi kriteria inklusi yaitu sebesar 64 sampel. Data dianalisis secara deskriptif dalam bentuk persentase untuk menggambarkan demografi pasien, pola bakteri dan penggunaan antibiotik serta kesesuaian jenis antibiotik definitif, sedangkan hubungan kesesuaian penggunaan antibiotik definitif terhadap *clinical outcome* dianalisis secara bivariat *Chi-square* dengan *software* SPSS.

Hasil penelitian: Ulkus diabetik banyak terjadi pada pasien dengan umur >45 tahun (84,37%), berjenis kelamin laki-laki (56,25%), dan mempunyai penyakit penyerta non infeksi (81,25%). Pola bakteri yang paling banyak ditemukan yaitu bakteri gram negatif (68,88%), sedangkan pola antibiotik yang sering digunakan adalah kombinasi 2 antibiotik yaitu ceftazidime + metronidazole (7,81%). Kesesuaian antibiotik definitif dengan hasil uji kultur bakteri dan sensitivitas antibiotik didapatkan 46,88% sesuai dan hasil analisis *Chi-square* diperoleh nilai $p=0,029$.

Kesimpulan: Terdapat hubungan antara kesesuaian antibiotik definitif terhadap *clinical outcome* pasien ulkus diabetik.

Kata Kunci: antibiotik definitif, *clinical outcome*, kultur bakteri, sensitivitas antibiotik, ulkus diabetik

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**ASSESSMENT OF APPROPRIATE USE OF DEFINITIVE
ANTIBIOTIC WITH THE RESULTS OF BACTERIAL CULTURE
AND ANTIBIOTIC SENSITIVITY TO CLINICAL OUTCOME
IN DIABETIC ULCER PATIENTS**

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ABSTRACT

Background: Diabetic ulcer infection requires appropriate antibiotic treatment. The selection of antibiotics must be based on bacterial culture and antibiotic sensitivity tests to give antibiotics according to the causative bacteria. Administration of antibiotics that are not by the results of bacterial culture and antibiotic sensitivity tests can cause clinical outcomes to deteriorate, the potential for antibiotic resistance, increase the risk of amputation, and increase mortality.

Objective: To determine the suitability of the use of definitive antibiotics with the bacterial culture test result and antibiotic sensitivity and to determine the relationship of definitive antibiotics usage suitability to clinical outcome.

Method: The study design was observational analytic with a retrospective cohort design. The study was conducted at the Yogyakarta City Hospital for the period January 1st, 2017 - December 31st, 2020. The research data was taken from the medical records of patients who met the inclusion criteria, namely 64 samples. The data were analyzed descriptively in the form of percentages to describe patient demographics, bacterial patterns, and antibiotic use as well as the suitability of definitive antibiotics, while the relationship between the suitability of definitive antibiotic use and clinical outcomes was analyzed by Chi-square bivariate with SPSS software.

Result: Diabetic ulcers were more common in patients >45 years old (84.37%), male (56.25%), and had non-infectious comorbidities (81.25%). The most common bacterial pattern found was gram-negative bacteria (68.88%), while the most frequently used antibiotic pattern was a combination of 2 antibiotics, namely ceftazidime + metronidazole (7.81%). The Conformity of definitive antibiotics with the results of bacterial culture and antibiotic sensitivity obtained 46.88% appropriate and the results of Chi-square analysis obtained p-value = 0.029.

Conclusion: There is a relationship between the suitability of definitive antibiotics to the clinical outcome of diabetic ulcer patients.

Keyword: definitive antibiotics, clinical outcome, bacterial culture, antibiotic sensitivity, diabetic ulcer

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