

**RINGKASAN**

**PROFIL KUMAN DAN SENSITIVITAS KEPEKAAN ANTIBIOTIK PADA  
PASIEN INFEKSI SALURAN KEMIH DI SMF PENYAKIT DALAM  
RSUD DR.SOETOMO SURABAYA, INDONESIA**

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Infeksi saluran kemih (ISK) adalah infeksi bakteri yang terjadi pada saluran kemih dan merupakan salah satu infeksi bakteri yang paling umum terjadi, mempengaruhi 150 juta orang setiap tahun di seluruh dunia. Untuk jenis kuman ISK di Indonesia bahkan di dunia, masih didominasi bakteri Gram negatif yaitu *Escherichia coli* dan *Klebsiella pneumoniae*. Dengan begitu banyaknya perbedaan distribusi kuman dan sensitivitas antibiotik untuk ISK, maka dilakukannya penelitian ini bertujuan untuk mengetahui distribusi kuman dan pola sensitivitas antibiotik pada pasien ISK di SMF Penyakit Dalam RSUD Dr. Soetomo Surabaya.

Penelitian ini adalah penelitian deskriptif *cross-sectional*. Sampel penelitian merupakan pasien pada ruang rawat inap SMF Penyakit Dalam RSUD Dr. Soetomo Surabaya, dengan hasil pemeriksaan kultur urin yang menghasilkan jumlah hitung koloni kuman  $\geq 10^5$  cfu/ml di Laboratorium Mikrobiologi Klinik RSUD Dr. Soetomo Surabaya periode Januari – Desember 2017. Data dianalisis dengan IBM SPSS Statistics.

Prevalensi pasien ISK yang teridentifikasi dengan pemeriksaan kultur urin sebesar (n=455/783; 58,1%). Bakteri *Escherichia coli* (n=231/495; 46,66%), *Klebsiella pneumoniae* (n=56/495; 11,31%), *Pseudomonas aeruginosa* (n=26/495; 5,25%), dan *Acinetobacter baumannii* (n=19/495; 3,83%) merupakan bakteri Gram negatif dengan jumlah terbesar. Jumlah terbesar untuk bakteri gram positif yaitu *Enterococcus faecalis* (n=65/495; 13,13%), dan *Enterococcus faecium* (n=12/495; 2,42%). Antibiotik paling sensitif untuk bakteri Gram negatif adalah amikacin (95,73%), meropenem (93,40%), imipenem (93,17%), ertapenem (81,25%). Antibiotik yang resisten tinggi terhadap bakteri Gram negatif adalah cefazolin (99,63%), ampicillin (97,73%), ceftriaxone (96,98%) dan amoxicillin-clavulanate (85,90%). Untuk bakteri Gram positif antibiotik yang paling sensitif adalah daptomycin (100%), vancomycin (85,92%), linezolid (78,95%), nitrofurantoin (61,76%). Antibiotik yang resisten tinggi terhadap bakteri Gram positif adalah cefoxitin (100%), clindamycin (100%), Gentamicin (98,65%) dan trimethoprim-sulfamethoxazole (97,14%).

**ABSTRACT**

**PROFILE OF BACTERIA AND ANTIBIOTIC SENSITIVITY IN  
URINARY TRACT INFECTION PATIENTS IN INTERNAL MEDICINE  
DEPARTEMENT GENERAL HOSPITAL DR. SOETOMO SURABAYA,  
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**Introduction :** Urinary Tract Infection (UTI) is a bacteria infection which occurred in urinary tract and one of the most common bacteria infection, affecting 150 million person per year around the world. The types of UTI's bacteria in Indonesia and the world, still being dominated by Gram-negative bacteria, such as *Escherichia coli* and *Klebsiella Pneumoniae*. Based upon varied distribution of bacteria and antibiotic sensitivity for UTI, this research aims to understand the bacteria distribution and antibiotic sensitivity pattern for UTI's patients in Internal Medicine Department General Hospital Dr. Soetomo Surabaya Indonesia of RSUD Dr. Soetomo Surabaya.

**Methods :** This research is a descriptive *cross-sectional* research. The sample are patients in inpatient rooms Internal Medicine Department General Hospital Dr. Soetomo Surabaya, with the results based upon urine culture with bacterial colonies count  $\geq 10^5$  cfu/ml in the Laboratory of Clinical Microbiology RSUD Dr.

Soetomo Surabaya, period January – December 2017. Data analyzed with IBM SPSS Statistics.

**Results :** The prevalence of patients identified with UTI, based on the examination of urine culture amounted to (n=455/783; 58,1%). *Escherichia coli* (n=231/495; 46,66%), *Klebsiella pneumoniae* (n=56/495; 11,31%), *Pseudomonas aeruginosa* (n=26/495; 5,25%), and *Acinetobacter baumannii* (n=19/495; 3,83%) are the largest number of Gram negative bacteria. The largest number of Gram-positive bacteria are *Enterococcus faecalis* (n=65/495; 13,13%), and *Enterococcus faecium* (n=12/495; 2,42%). The highly sensitive Antibiotic for Gram-negative bacteria are amikacin (95,73%), meropenem (93,40%), imipenem (93,17 %), ertapenem (81,25%). Antibiotic with highly resistant against Gram-negative bacteria are cefazolin (99,63%), ampicillin (97,73%), ceftriaxone (96,98%) dan amoxicillin-clavulanate (85,90%). As in, Gram-positive bacteria, the highly sensitive antibiotic are daptomycin (100%), vancomycin (85,92%), linezolid (78,95%), nitrofurantoin (61,76%). Antibiotic with highly resistance against Gram-positive bacteria are ceftazidime (100%), clindamycin (100%), Gentamicin (98,65%) dan trimethoprim-sulfamethoxazole (97,14%).

**Conclusion :** The prevalence of UTI's patients in inpatient rooms Internal Medicine Department General Hospital Dr. Soetomo Surabaya are (n=455/783; 58,1%). The types of Gram-negative bacteria dominated by *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Acinetobacter baumannii*. Subsequently, the Gram-positive bacteria are dominated by *Enterococcus faecalis* dan *Enterococcus faecium*. Antibiotic with highly sensitivity for Gram-negative

bacteria are amikacin, meropenem, imipenem, ertapenem, while the cefazolin, ampicillin, ceftriaxone dan amoxicillin-clavulanate possess high resistance. Antibiotic with highly sensitivity for Gram-positive are daptomycin, vancomycin, linezolid, nitrofurantoin, while cefoxitin, clindamycin, Gentamicin and trimethoprim-sulfamethoxazole possess high resistance.

**Keywords :** UTI, antibiotic sensitivity, bacteria distribution