

COST EFFECTIVENESS
KOTRIMOKSAZOL DAN AMPISILIN PADA PENDERITA INFEKSI
SALURAN KEMIH
ASPEK MEDIK LANGSUNG

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INTISARI

Pendahuluan : Infeksi saluran Kemih (ISK) merupakan salah satu penyakit penting pada neonatus dan anak. Indikasi sebenarnya pada anak sulit diperkirakan karena ISK dapat tidak menunjukkan gejala (asimtomatik). Penanganan yang tidak tepat dapat menimbulkan infeksi berulang yang berlanjut sebagai jaringan parut ginjal ataupun komplikasi berupa urosepsis. Dokter menggunakan berbagai macam antibiotik dengan lama pengobatan berbeda-beda. Standarisasi pengobatan mempertimbangkan obat yang lebih efektif, lebih toleran dan biaya murah untuk mengurangi angka kesakitan dan biaya kesehatan. Penelitian ini bertujuan untuk membandingkan hasil guna dan besar biaya antara pengobatan ampicilin dan kotrimoksazol oral terhadap penderita ISK anak.

Subyek dan Metoda: Desain penelitian ini adalah uji klinik. Sebanyak 110 pasien ISK anak berumur lebih dari dua bulan yang dirawat inap di bangsal anak RS Dr. Sardjito memenuhi kriteria inklusi dan dirandom menjadi 2 kelompok penelitian yaitukelompok ampicilin (57 subyek) dan kelompok kotrimoksazol (53 subyek). Subyek dirandom dalam dua kelompok yaitu kelompok ampicilin dan kotrimoksazol. Diagnosis ditegakkan berdasarkan kriteria klinis dan laboratoris. Diagnosis laboratoris dibuat berdasarkan angka kuman, hasil kultur urin dan sensitivitas sebelum terapi. Angka kesembuhan berdasarkan evaluasi klinis dan laboratoris setelah terapi antibiotik 7 hari. Analisis statistik menggunakan uji chi- square untuk mengetahui perbedaan angka kesembuhan antara kelompok ampicilin dan kotrimoksazol. Regresi logistik digunakan untuk mengetahui pengaruh variabel terhadap kesembuhan. Analisis biaya dihitung berdasarkan biaya langsung yang dikeluarkan (biaya obat, lama rawat, pemeriksaan penunjang) diantara kedua kelompok.

Hasil: Hasil penelitian kelompok kotrimoksazol memerlukan lama rawat lebih pendek yaitu 4,2 hari. Jenis kuman kultur urine terbanyak ditemukan adalah *E.coli* (45,4%). Sensitivitas kuman terhadapkedua antibiotik berdasarkan hasil uji chi-square tidak berbeda bermakna X^2 0,89(IK95% 0,67-1,19) $p=0,44$. Kesembuhan di antara kedua kelompok terdapat perbedaan bermakna yaitu X^2 : 3,715 (IK95% 1,099-11,924) $p= 0,025$. Biaya yang dibutuhkan oleh kelompok kotrimoksazol berbeda bermakna dibanding kelompok ampicilin yaitu $t=28510,464$ IK95% -143617-30591,5) $p= 0,003$ dengan analisis biaya ampicilin lebih tinggi Rp 5444 tiap 1 kali kesembuhan disbanding kotrimoksazol. Ratio antara pengobatan ampicilin 1,19 dibanding kotrimoksazol.

Kata kunci: ampicillin, kotrimoksazol, biaya, infeksi saluran kencing, angka kesembuhan, kultur urin, angka kuman.

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Cost Effectiveness **Cotrimoxazole And Ampicillin On Urinary Tract Infection** **Children**

On Direct Medical Aspect

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Abstract

Objective. Urinary tract infection (UTI) is the one of important disease can cause significant morbidity in infants and children. The true incidence of UTI in children is difficult to estimate because infection in infants and children can be asymptomatic. Delay in treatment of UTI can lead to recurrent infection continued to renal scarring or complication with urosepsis. Physician use a large number of different antimicrobials and give them for widely varying durations to children and infants with suspected UTI. More standardized use of the most effective, best tolerated and least costly treatment regimens would have considerable benefit both in reducing morbidity and health care costs. The aim of this study is to compare cost and effectiveness ampicillin and cotrimoxazole oral treatment in UTI children's.

Methods. This study uses clinical trial design. A total of 110 child patients in the Dr. Sardjito Hospital with urinary tract infection older than 2 months age who enrolled on this study were randomly assigned to receive either ampicillin (57 children) or cotrimoxazole (53 children). Diagnosis based on clinical and laboratory criteria. Laboratory diagnosis made based on bacterial count and urin culture tests. The cure rates were assessed after seven days treatment based on clinically and laboratory evaluation. chi-square test is done to assess the difference at clinical outcomes between ampicillin and cotrimoxazole groups. Logistic regression analysis is used to assess the relationship of variable that influence the outcomes. Cost analysis accounted by direct cost (medical, length of stay, labory cost) between two groups

Result. Mean of the length of stay cotrimoxazole patient is shorten than ampicillin patient, the mean need 4,2 days. It was also found that *E coli* was the most frequent (45,4%) microbes detected in the urine culture. There were did not show significant differences in the sensitivity of the microbes to the two antibiotics. The results indicated that cotrimoxazole showed significant differences in their effectiveness (chi-square test, $p < 0,05$). The cost of cotrimoxazole patient groups significant differences with ampicillin patients (t-test, $p < 0,05$) and the cost efektivness ampicillin was Rp 5444. Ratio between ampicillin and cotrimoxazole was 1,19.

Key words: *ampicillin, cotrimoxazole, cost, urinary tract infection, cure rate, urine culture, bacterial count*

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