

# Point prevalence survey penggunaan antibiotik pada pasien dewasa rawat inap di RSUPN Cipto Mangunkusumo = Point prevalence survey of antibiotics use among adult-inpatient in National Referral Cipto Mangunkusumo Hospital

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## Abstrak

Latar belakang : Peresepan antibiotik (AB) yang tidak tepat umum terjadi di seluruh dunia dan berkontribusi pada meningkatnya organisme yang resisten. Diperlukan sistem surveilans untuk memantau penggunaan AB dan resistensi untuk pengambilan keputusan yang tepat.

Indonesia belum pernah menerapkan Point prevalence survey (PPS) dalam evaluasi AB dan resistensi.

Tujuan: untuk mengetahui profil penggunaan antibiotik dan resistensi mikroorganisme di rumah sakit menggunakan metode PPS

Metode : penelitian potong lintang. Dilakukan pengumpulan data demografi, penggunaan antibiotik dan kultur resistensi mikroorganisme menggunakan formulir PPS.

Hasil : Pada hari penelitian dilakukan survei terhadap 451 pasien, ditemukan 244 (54,1%) pasien mendapatkan AB dengan diagnosis paling banyak adalah pneumonia (25%). Alasan penggunaan antibiotik adalah untuk tatalaksana infeksi dari komunitas sebanyak 50,8%, infeksi dari fasilitas kesehatan sebanyak 15,5%, penggunaan AB sebagai profilaksis sebanyak 30,7% dan 3% tidak ditemukan alasan indikasi penggunaan AB. Diresepkan 368 AB, di mana hanya 46 (12,5%) AB yang digunakan sebagai terapi definitif. Tiga AB yang paling sering digunakan adalah ceftriaxone (15,5%), levofloxacin 9,2% and ampicillin sulbactam 7,9%. Tanggal evaluasi penggunaan AB hanya tertulis pada 88 (22,3%) AB. Tidak tersedia pedoman tatalaksana lokal sebanyak 83 (22,6%) penggunaan AB dan hanya 214 (58,2%) AB yang diresepkan sesuai dengan pedoman tata laksana lokal. Kami melakukan evaluasi terhadap 244 pasien yang menggunakan AB dan hanya 91 (38%) pasien yang dilakukan pemeriksaan kultur dan tes resistensi. Didapatkan 222 sampel, dimana 81 (36,5%) adalah steril. Tiga mikroorganisme terbanyak adalah *Klebsiella pneumoniae* 47 (20,7%), *Pseudomonas aeruginosa* 22 (9,9%) dan *Escherichia coli* 20 (9%). Jumlah mikroorganisme extended-spectrum -lactamase (ESBL) didapatkan sebesar 21,4%, resisten terhadap karbapenem 12,5% dan Multiple drug resistance (MDR) sebesar 17,7%.

Kesimpulan : lebih dari setengah pasien yang disurvei menggunakan AB dan angka kepatuhan penggunaan antibiotik masih belum baik, evaluasi resistensi kuman terbatas karena jumlah sampel yang diperiksa kurang. Pelaksanaan PPS terbukti efektif dan efisien.

.....Background: Inappropriate antibiotic prescribing appears to be common worldwide and is contributing to the selection of resistant organisms. Surveillance systems to monitor antimicrobial use and resistance are needed to improve decision making and assess the effect of interventions. Point prevalence surveys (PPSs) in Indonesian hospitals have not yet been applied. Aim : to evaluate the antibiotic prescribing trends and microorganism resistance using PPS methods Methods: A one day, cross-sectional PPS was performed whereas total of 10 days were taken. Data on demographics, antimicrobial use and culture/resistance test of all adult inpatients were collected using a data collection form. Results: On the day of the study 451 adults

patients were surveyed, 244 (54.1%) were received 368 antibiotics and the most common diagnosis was pneumonia (25%). Reasons of using the antibiotics were to treat community acquired infection (CAI) 50.8%, hospital acquired infection (HAI) 15.5%, prophylaxis 30.7% and 3% was unknown. 368 antibiotics prescriptions were issued, of which 46 (12.5%) were used for definitive therapy. The top three antibiotics prescribed were ceftriaxone (15.5%), levofloxacin 9.2% and ampicillin sulbactam 7.9%.

Review date of using antibiotics were performed in 88 (22.3%). Local guidelines was not available for 83 (22.6%) of prescribed antibiotics and among prescribed antibiotics with local guidelines available compliance was 214 (58.2%). We evaluate the culture test among those received antibiotics (244), 91 (38%) patients were performed culture and resistance test. From these 222 samples of culture, 81 (36.5%) was sterile. The most three growth microorganisms were *Klebsiella pneumoniae* 47 (20.7%), *Pseudomonas aeruginosa* 22 (9.9%) and *Escherichia coli* 20 (9%). The number of extended spectrum -lactamase (ESBL) recorded at 21.4%, Carbapenem Resistance culture was 12.5% and Multiple drug resistance was 17.7%. Conclusions: more than half-of-patients surveyed by PPS in an hospital in Indonesia were on antibiotics, has a limitation due to availability of result and sample. Conducting PPS in teaching hospital proved to be effective and efficient.