

International Conference & Exhibition on Vaccines & Vaccination

22-24 Nov 2011 Philadelphia Airport Marriott, USA

Antimicrobial resistance among nosocomial isolates in a public hospital in Peru

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Issue: Emergence of multiresistant strains of hospital pathogens has presented a challenge. Bacteriological surveillance of the cases of nosocomial infections is crucial for developing antibiotic stewardship programs.

Methods: A prospective study was undertaken during January through December 2007 among 802 patients from medicine, surgery, pediatric and gyneco-obstetric wards at Dos de Mayo Hospital in Lima, Peru. Patients were tracked for the occurrence of nosocomial infections (NI) through clinical-bacteriologically. Antibiotic susceptibility testing was undertaken using Kirby-Bauer disc diffusion method.

Results: The overall infection rate was 26.18 per 100 patients. Nosocomial pneumonia was the most common NI (23.47%), followed by intravascular catheter-related infections (22.8%), wound infection (19.8%) and urinary tract infection (18.15%). Ninety nine percent of the isolates were bacterial. More than 70% of the NIs were caused by Gram-negative bacteria predominantly *Pseudomonas aeruginosa* and *Escherichia coli*. Almost 5% of the isolates were resistant to all the antibiotics for which susceptibility was tested, the rest were sensitive to amikacin, cefoperazone -sulbactam, cotrimoxazole, methicillin, teicoplanin, vancomycin, rifampicin, imipenem, aztreonam and linezolid, either independently or in combination. The proportion of MRSA was 43%. Resistance to a particular antibiotic was found to be directly proportional to the antibiotic usage in the study setting.

Conclusion: Surveillance of nosocomial infections by using microbiologic surveillance and reinforcement of hand washing are critical to avoid polyantimicrobial resistant nosocomial infections in a hospital.

Biography

Dr. Garcia, a graduate of San Marcos Medical School, trained in Infectious Diseases at Dos de Mayo Hospital in Lima, Peru and Emilio Ribas Institute of Infectology, Sao Paulo, Brazil. He trained in Epidemiology at The Johns Hopkins Bloomberg School of Public Health. He has fourteen years of experience in research and practice in infectious diseases. From 2001 to 2002, he served as Physician Assistant to Doctors Without Borders. In May 2002 he finished studies of Public Health at Cayetano Heredia University. He is Clinical Assistant Professor of Infectious Diseases, San Martin de Porres University, Lima – Peru.