Antibiotic Use in a Brazilian City
F. Del Fiol*, S. Barberato Filho
University of Sorocaba, Sorocaba, Brazil

The indiscriminate use of antibiotics has contributed to increase the antimicrobial resistance around the world. In Brazil, there is no control regarding antibiotics use, once it is possible to obtain any antibiotic without medical prescription. The aim of the present study was to observe the quality of the antibiotics use (prescription, orientation and use) in a large Brazilian city. A survey (50 questions) were divided into three parts: (1) questions about medical appointment and prescription; (2) about patients’ pathology; (3) about the level of information of the patient regarding antibiotics. 403 patients answered right before they received the antibiotics. 3 pharmacies were included in the sample: (a) commercial; (b) public; (c) University’s pharmacy. 28% of the patients aged from 0 to 10 years-old, 71% of the medical appointments were performed in the free-public healthy service and 40% of the person responsible for giving antibiotics to the children had less than four years of scholarly. 21% of all users have been using other drugs that could cause drug interactions and induce therapeutic failure (51% of patients aging 60 years or more have been using other drugs). 40% of the patients did not complete the antibiotic course due to economical reasons and 20% due to disappearance of symptoms (fever). The majority of patients used water to ingest the drug, but 32% used milk. 60% of the patients did not present fever during the medical appointment. 15% did not receive any medical orientation regarding antibiotic use. The information level of the patients regarding antibiotics was 50% of correct answers, which shows the deficiency of knowledge of the doctors and patients regarding this issue. We concluded that the necessity of the deficiency of knowledge of the doctors and patients is very urgent in order to promote the rational use of antibiotics. Supported by FAPESP.

doi:10.1016/j.ijid.2008.05.1053

Bacterial Resistance in Argolis, Greece
K. Mitrakou, I. Mitrakos, G.C. Michalopoulos, E. Xounta, G. Mavras, M. Pavlaki, F. Rozi
General Hospital of Argos, Greece, Argos, Greece

Objectives: To study the antibiotic resistance in the microorganisms isolated from blood cultures at the General Hospital of Argos, Greece during the period 01/01/05 to 31/10/2007.

Methods: 791 blood cultures were studies. The identification and the antimicrobial susceptibility tests were performed using the analysis Bact/ALERT and the automat system VITEK 2 compact (BIOMERIEUX).

Results: From the 791 blood cultures 661(83,56%) were negative and 130(16,43%) were positive. CONS-coagulase negative staphylococci were the most common isolated bacteria [50 samples (38,46%)], followed by E. coli [25 samples (19,23%)], Brucella melitensis [21 samples (16,15%)], Staphylococcus aureus [12 samples(9,23%)], Pseudomonas aeruginosa [7 samples (5,38%)], Klebsiella pneumoniae [3 samples (2,3%)], Enterobacter cloacae [3 samples (2,3%)], Enterococcus faecalis [2 samples (1,53%)]. The resistance of E. coli to Ampicillin, Amoxicillin/clavulanic, ciprofloxacin and 3rd generation cephalosporins were 36%, 12%, 8% and 0% respectively. CONS and Staphylococcus aureus presented 48% and 16,66% resistance to Oxacillin respectively and 0% resistance to Vancomycin. Pseudomonas aeruginosa presented 28,57% resistance to ceftaziidine, aminoglycosides and imipenem and 42,85% resistance to ciprofloxacin and piperacillin. For Klebsiella pneumoniae the resistance rate was 0% to imipenem, 33,33% to aminoglycosides, 66,66% to ciprofloxacin and 3rd generation cephalosporins. The enterococcus faealis strains presented 0% resistance to vancomyc and linezolid.

Conclusions: Comparing these results to those of EARSS (European Antimicrobial Resistance Surveillance System), 2006, was observed that the antibiotic resistance prevalence of E. coli was lower in this region than that of the rest of Greece and European countries (fluoroquinolones 8% in Argolis, 14,5% in Greece, 29,2% in Germany, 28% in Spain, 13,8% in France, for cephalosporins in Argolis 0%, in Greece 6,1%, UK 7,7%, Italy 7,4%). The resistance to vancomycin of Staphylococcus aureus 0% is similar to that seen in European countries. Pseudomonas aeruginosa and Klebsiella pneumoniae presented significant resistance rate to other countries. Greece has the higher resistance rate to imipenem, 47,6% for pseudomonas and 32,9% for Klebsiella and also to Cef taziidine for Pseudomonas 34,1% but in Argolis it was 28,57% resistance to imipenem for Pseudomonas, 0% for Klebsiella and 28,57% resistance of Pseudomonas to ceftazidim.

doi:10.1016/j.ijid.2008.05.1054

Prevalence of Integrons in Malaysian Isolates of Antibiotic Resistant Bacteria
S.Y. Chia1, S. Muniandy1,∗, N. Parasakthi2
1 University of Malaya, Kuala Lumpur, Malaysia
2 University of Monash, Kuala Lumpur, Malaysia

Integrons are capable of scavenging transcriptionally silent antibiotic resistance gene cassettes and converting them into functional genes. This study characterizes the resistance gene cassettes carried by integrons in clinical isolates of multiresistant Enterobacteriaceae. Class 1 integrons were shown to be present in 34 out of the 38 multiresistant strains by PCR screening for the intI1 gene. The qacEΔ1 & sul1 genes were present in 28 of these strains. PCR amplification of the 5′- and 3′-conserved segments, close to the gene cassette crossover points showed that 23 of the intI1-positive strains carried an integron with inserted gene cassettes in their variable regions. The full sequences of the inserted gene cassettes were studied by restriction mapping and gene cassettes were classified into 8 groups. Representative gene cassettes of each group were then sequenced. Gene cassettes were found to carry genes encoding resistance to streptomycin and spectinomycin (aadA1, aadA2, aadA5 and aadB), trimethoprim (dfrA1, dfrA15, dfr16, dfr17...