

cluster 5 were resistant to metronidazole whereas 78% of the strains in cluster 6 were susceptible to both antibiotics.

**Conclusion:** These results indicate that clinical *Helicobacter pylori* strains in terms of antibiotic resistance are highly diverse. It seems the characteristics of the resistant and susceptible strains can be predicted by clustering of strains using RAPD-PCR profiling.

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17.011

#### Antimicrobial Susceptibility Among *Pseudomonas aeruginosa* Isolates from a Central Hospital in the Centre of Portugal During Four Years

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**Background:** *Pseudomonas aeruginosa* (PA) is an important nosocomial pathogen causing a wide spectrum of infections and leading to substantial morbidity and mortality. In order to apply optimal therapeutic guidelines physicians must be aware of recent resistance surveillance, and epidemiological data. The main objective was to determine antimicrobial susceptibility of PA isolates in order to assist the guidelines for empirical regimens and infection control measures.

**Methods:** From April 2003 - April 2007, 1446 PA isolates were collected in Centro Hospitalar de Coimbra. Nosocomial isolates (N=907) and ambulatory ones (N=539) were obtained from sputum (41.2%), urine (24.2%), exudates (14.2%), blood (4.6%) and other sources (15.8%). They were identified with API32GN (BioMérieux) and MicroScan WalkAway (DadeBehring) and susceptibility patterns were determined with these panels. Susceptibilities to Piperacillin (PIP), Piperacillin plus Tazobactam (TZP), Aztreonam (AZT), Ceftazidime (CAZ), Imipenem (IP), Meropenem (MP), Amikacin (AMK), Gentamicin (GN), and Ciprofloxacin (CIP) were guideline by CLSI.

**Results:** Overall, MP was the best agent (88.0%), followed by TZP (87.6%), AMK (86.4%), PIP (85.2%), CAZ (82.5%), IP (79.9%), AZT (79.5%), GN (69.2%) and CIP (66.3%). Nosocomial isolates responded to TZP (82.6%), AMK (82.5%), MP (81.7%), PIP (79.4%), CAZ (75.5%), AZT (71.4%), IP (70.9%), GN (62.6%), and CIP (60.5%). Ambulatory isolates presented susceptibility superior to 90%, except for GN (80.1%) and CIP (76.1%). During these years the susceptibilities to most important beta lactams (IP, MP and CAZ) had diminished; activity of IP decreased 5.9%, CAZ 4.8%, and MP 3.6%.

**Conclusion:** Appropriate empirical treatments based on knowledge of particular resistance patterns are important determinants of the success of treatment, therefore studies of surveillance can be helpful in fight to control the development and spread of resistance.

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#### In Vitro Susceptibility of *B. mellitensis* to Different Antibacterial Agents

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**Background:** Several antibiotic combinations are being used for treatment of brucellosis in endemic regions. The purpose of this study was to evaluate the antibacterial susceptibility of several common antibiotics which are used for treatment of brucellosis.

**Methods:** From May to October 2007, blood cultures from 26 cases of brucellosis were positive for *brucella mellitensis*. Susceptibility testing were performed with using gentamicin, streptomycin, ciprofloxacin, ofloxacin, doxycycline, cotrimoxazole, rifampin and the results were recorded.

**Results:** All isolates were susceptible to gentamicin, streptomycin, Ciprofloxacin, ofloxacin, doxycycline but resistance to rifampin and Cotrimoxazole.

**Conclusion:** The results show that resistance of *brucella mellitensis* to rifampin and cotrimoxazole are being developed in endemic regions. Attempts to find out a regimen free of these agents are recommended.

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#### In-Vitro Activity of Ertapenem Against Extended-Spectrum Beta Lactamase (ESBL) Producing Gram-Negative Bacilli (GNB) Seen in Indian Medical Centers

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**Background:** ESBL producing GNB causing blood stream infections (BSI), skin and soft tissue (SSTI) and respiratory tract infection (RTI) are widely prevalent in Indian medical centers. We compared the in-vitro activity of five commonly used antimicrobials to treat such infections against the recently introduced carbapenem - ertapenem (ERT).

**Methods:** From a collection of 776 clinically significant isolates prospectively collected (2005–2007) from seven medical centers, 238 GNB isolates (*Escherichia coli* [EC], =122, *Klebsiella* spp. [KS], =107 and *Enterobacter* spp. [ES]=9) obtained from RTI (n=75), BSI (n=74), SSTI (n=70) and urinary tract (n=19) were tested. ESBL screen was performed by disc diffusion using cefotaxime (CTX) and ceftazidime (CZD), confirmed using CTX and CZD discs with and without clavulanic acid and Etest ESBL strips. Antimicrobial resistance to levofloxacin (LEV), amikacin (AMK), piperacillin/tazobactam (P/T), imipenem (IMP), meropenem (MER) and ERT was determined by agar dilution and Etest. Isolates were considered multi-drug resistant (MDR), if resistant to >2 classes. Polymerase Chain Reaction (PCR) was done to determine beta lactamases (bla)TEM, SHV and CTX-M among 120 isolates.