Methods: Non-duplicate strains were consecutively collected from five medical centres in 5 states using isolates from bacteraemia ($n = 253$), pneumonia ($n = 146$), complicated skin and skin structure infections ($n = 264$), and other infections ($n = 269$). All isolates were tested against tigecycline using validated commercial reference broth microdilution panels (TREK Diagnostics), with concurrent quality controls and CLSI (M100-S18) interpretations for comparison agents. Tigecycline breakpoints published by the US-FDA were applied for each indicated species or genus group.

Results: A total of 932 (268 Gram-negative and 664 Gram-positive) isolates were processed. Tigecycline was highly active against the top 10 non-pseudomonal pathogens which comprised 88% of all tested isolates. Tigecycline MIC$_{90}$ results ranged from ≤0.12 to 1 mg/L, highest for Klebsiella spp. and Proteae (data not shown). At US-FDA published breakpoints, tigecycline exhibited complete inhibition of indicated species except for a single strain of E. cloacae (MIC, 4 mg/L). Over 28% of Staphylococcus aureus were oxacillin-resistant, and one Enterococcus faecium was vancomycin-resistant. Tigecycline was highly effective against these strains.

Conclusions: Tigecycline has potent activity against all the common pathogens isolated in 2006 from Australian patients, including those resistant to other drug classes. Documented acquired resistance was rare among indicated pathogens, however, Pseudomonas remains refractory to potential tigecycline therapy.

doi:10.1016/j.ijid.2008.05.1083

66.038
An Asia/Pacific Rim Perspective of Enterobacteriaceae Multi-drug Resistant (MDR) Isolates Against Tigecycline

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Objectives: Worldwide the prevalence of MDR Enterobacteriaceae are increasing, including ESBLs, AmpC, fluoroquinolone and carbapenem resistant strains. The T.E.S.T. program determined the in vitro activity of tigecycline compared to amoxicillin-clavulanic acid, piperacillin-tazobactam, levofloxacin, ceftriaxone, cefepime, ampicillin, amikacin, minocycline, ceftazidime and imipenem against Enterobacteriaceae species collected from hospitals in Asia/Pacific Rim 2004–2007. This study evaluated the activity of tigecycline against multi-resistant microorganisms associated with nosocomial infections.

Methods: A total of 2778 clinical isolates were identified to the species level at each site and confirmed by the central laboratory. Minimum Inhibitory Concentration (MICs) were determined by each site using supplied broth microdilution panels and interpreted according to CLSI guidelines. Tigecycline breakpoint is defined as susceptible MICs ≤2 mcg/mL.

Results: The table illustrates the %S and MIC$_{90}$ of tigecycline to MDR pathogens

Conclusions: Multi-drug resistance is common in health care acquired pathogens. The presented data indicate that tigecycline is highly potent against nosocomial pathogens including MDR isolates.

doi:10.1016/j.ijid.2008.05.1084

66.039
Evaluation of Multidrug Resistant (MDR) Isolates Against Tigecycline: A Canadian Perspective

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Objectives: Tigecycline (TIG) is a new glycylcycline with enhanced activity against many multidrug resistant (MDR) pathogens including ESBL and AmpC producing Enterobacteriaceae, methicillin-resistant S. aureus (MRSA), carbapenem resistant Acinetobacter and fluoroquinolone resistant gram-negative rods. The TEST study evaluated the activity of TIG and comparators to pathogens in Canada 2004–2007.

Methods: A total of 1675 pathogens were collected from 8 participating sites in Canada from 2004–2007. Isolates were identified to the species level and CLSI specified MICs were performed at each site. CLSI or FDA breakpoints were used, where applicable, to determine % susceptibility.

Results: Tigecycline MICs are recorded in the table below

Conclusions: Tigecycline showed excellent in vitro activity against a diverse collection of pathogens isolated in Canada between 2004–2007. MIC$_{90}$ values of 0.5 mcg/ml against most Enterobacteriaceae including ESBL and MIC$_{90}$ of ≤0.12 mcg/ml against gram-positive pathogens document the in vitro potency of tigecycline, a new glycylcycline.

doi:10.1016/j.ijid.2008.05.1085

66.040
One Year Survey and Resistance Analysis in 757 Isolates Causing Urinary Tract Infections

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Aim: To assess the antimicrobial resistance pattern in pathogens responsible for urinary tract infections in nosocomial patients over a period of one year.

Material and Method: From January 2006 to December 2006, 3665 urine cultures from nosocomial patients were collected. All positive cultures with a colony count ≥105 CFU/ml for Gram-positive and Gram-negative bacteria and ≥103 CFU/ml for Candida species were selected for the analysis. Duplicate isolates were not considered.

Results: Among the 757 positive cultures $n = 135$ belonged to I.C.U., $n = 58$ to Surgical Dept, $n = 347$ to Internal Medicine Dept and $n = 217$ to Outpatient Dept. Among the 757 positive cultures $n = 523$ belonged to female and $n = 234$ to
male patients. Among the Gram-negative Escherichia coli \( n = 337 \) presented the highest prevalence, followed by \textit{Proteus mirabilis} \( n = 97 \), \textit{Pseudomonas aeruginosa} \( n = 67 \), \textit{Candida} species \( n = 65 \), \textit{Klebsiella pneumoniae} \( n = 45 \) and \textit{Acinetobacter baumannii} \( n = 22 \). Among Gram positive isolates \textit{Enterococcus faecalis} was the most prevalent \( n = 28 \), followed by coagulase negative staphylococci \( n = 16 \), \textit{Enterococcus faecium} \( n = 11 \) and \textit{Staphylococcus aureus} \( n = 5 \). They were 4 VRE strains (\textit{Enterococcus faecium}) in the urine. All Gram positive cocci were sensitive to linezolid. Resistance rates to Gram-negative are presented. All Gram-negative were susceptible to colistin. All strains of \textit{Acinetobacter baumannii} were susceptible to doxycyclin while they appeared susceptible to ampicillin/subactam to a percentage of 90%. The largest number of fungus positive samples were taken from the internal medicine departments

**Conclusions:** \textit{Escherichia coli} is the primary bacterial pathogen causing UTIs in nosocomial patients. \textit{Candida albicans} was isolated from the majority of the samples, compared to non \textit{albicans}.

doi:10.1016/j.ijid.2008.05.1086

**Impact of Educational Efforts on Antimicrobial Prescribing and Bacterial Resistance Rates in a Community Hospital**

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**Purpose:** The prescribing of quinolones in the outpatient setting has resulted in widespread quinolone resistance among gram-negative organisms. Because of this, quinolones should no longer be used as empiric therapy in the management of urinary tract infections within our hospitals. The objectives of this study were to evaluate how educational efforts would impact antimicrobial prescribing in the treatment of urinary tract infections and whether the change in prescribing habits would result in a change in bacterial susceptibilities to quinolones within our hospitals.

**Methods:** Data was collected on all hospitalized patients admitted with a diagnosis of urinary tract infections, urosepsis, or pyelonephritis \( n = 113 \) during January - May 2005. Antimicrobials selected for empiric and targeted therapy were reviewed. Twenty-nine percent of community-acquired infections and 41.2% of institutionally-acquired infections were found to be resistant to the quinolones, while only 15.6% and 17.1% of the respective infections were resistant to cefazolin. The results were presented to the Antibiotic Subcommittee of the Pharmacy & Therapeutics Committee, Emergency Medicine Department, and hospitalists physician group. This was followed by an article published in the physician newsletter on the management of urinary tract infections. Empiric prescribing guidelines encouraging the use of cefazolin were incorporated into the system-wide antibiogram. Educational posters were created and displayed at all of the nursing units and Emergency Rooms. A follow-up study was conducted in January - March 2007 \( n = 75 \) to evaluate the impact of the educational efforts on antibiotic prescribing. Finally, the bacterial susceptibilities were compared before and after the educational efforts.

**Results:** The empiric prescribing of quinolones for the treatment of urinary tract infections, urosepsis, or pyelonephritis decreased from 67.2% of patients in 2005 to 46.5% in 2007. The fraction of patients discharged on a quinolone also decreased, 73% in 2005 to 47.7% in 2007. A comparison of the 2005 to 2006 microbial data found that there was an increase in the susceptibility of \textit{Pseudomonas aeruginosa} to quinolones from 65 -67% to 78% at PMC and 54% to 62% at POM, while there was no change in antimicrobial susceptibilities at PPH facilities that did not have an educational program in place.

**Conclusions:** Educational efforts modestly improved the selection of empiric antimicrobials in the treatment of urinary tract infections at our community hospitals. Furthermore, the bacterial susceptibilities to the quinolones within our hospitals improved.

doi:10.1016/j.ijid.2008.05.1087

**Is Ciprofloxacin Effective in the Treatment of Mycoplasma Pneumonia? A Case Report**

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A 22-year-old male army officer cadet presented with a three day history of high fever, cough with haemoptysis, sore throat, myalgia and severe diarrhoea. Investigations on admission showed a normal total white cell count, hyponatraemia, a raised creatine kinase, pyuria and a normal chest radiograph. He was administered oral ciprofloxacin for three days with no resolution of fever or symptoms. Repeat chest radiograph done on Day 4 of admission showed multilobar pneumonia with worsening of laboratory results. Antibiotic therapy was changed to intravenous penicillin, ceftazidime and azithromycin. His fever and symptoms resolved promptly within 48 hours. Subsequent serological studies revealed a nine-fold increase in \textit{Mycoplasma pneumoniae} antibody titre, and the patient was diagnosed with Mycoplasma pneumonia. Ciprofloxacin is generally considered as an effective treatment against \textit{Mycoplasma pneumoniae} based on \textit{in-vitro} susceptibility to ciprofloxacin. Till date there has been only one case report of its effective use (Masayoshi et al. Antibiotics and Chemotherapy. 18(12), p1835—1839 Japanese). This case report is the first in the literature to suggest clinical failure. Ciprofloxacin may not be effective in the treatment of \textit{Mycoplasma pneumoniae}.

doi:10.1016/j.ijid.2008.05.1088

**Monitoring of Antibiotic Prophylaxis Usage in a Tertiary Care Hospital**

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**Background:** It is a common knowledge that antibiotics are used indiscriminately. They should be used for actual infections and not for colonization or prolonging the