Molecular Epidemiology of Cephalosporinases and Extended Spectrum β-Lactamases (ESBLs) in Proteus mirabilis Isolates From Croatia: Following the Spread of Resistance Determinants Between Long-Term Ca ...

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Source / Izvornik: **Open Forum Infectious Diseases, 2018, 5, S363 - S363**

Journal article, Published version
Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

https://doi.org/10.1093/ofid/ofy210.1033

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:220:975995

of patients (82%) suffered blast injuries; of which, 88% were from improvised explosive devices. Patients had a median injury severity score (ISS) of 38 (IQR 30–45) and time from injury to first infecting *K. pneumoniae* isolate was 15 days (IQR 8–31). The median hospital stay was 49 days (IQR 28–70) and four patients died. All patients had received antibiotics prior to diagnosis. Twenty-three (46%) patients had initial isolates classified as MDR. There was no difference in age, ISS, or time from injury to first isolation among those who did and did not have initial MDR isolates. Sixteen patients had 64 serial isolates, of which 24 were wound, 20 respiratory, 14 blood and six urine. Three of these 16 patients died compared with 1 of 35 patients without serial isolates.

Conclusion. *K. pneumoniae* infections are common among combat casualties. Patients with *K. pneumoniae* infections were severely injured and almost half of initial infecting isolates were MDR, complicating treatment.

Disclosures. **All authors:** No reported disclosures.

1199. Epidemiology of Carbapenem-Resistant *Klebsiella pneumoniae:* A Comparative Study Between Facilities in the United States and the Dominican Republic

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Session: 136. Healthcare Epidemiology: MDR-Gram Negative Infections
Friday, October 5, 2018: 12:30 PM

Background. The prevalence of multi-drug-resistant organisms (MDRO) is on the rise globally. MDRO infections carry high morbidity and mortality. There is a paucity of data on Carbapenem-resistant *Klebsiella pneumoniae* (CRKp) in the Dominican Republic (DR). Evaluating CRKp in various settings will provide data on contrasting epidemiologic risk factors. We evaluated the epidemiology of CKRp in three contrasting settings, a 495-bed urban academic center (AC), a 151-bed urban community hospital (CH) and a 200 bed teaching hospital in the DR (DRH).

Methods. We performed a retrospective cohort study of patients with CRKp cultures from 2014 to 2016 from AC, CH and DRH. A comparative evaluation of the epidemiology of CRKp between the cohorts was performed. Demographics, co-morbid conditions, antibiotic sensitivity, and outcomes were compared between hospital cohorts.

Results. Cohort AC had 64 patients, compared with eight from CH and eight from DRH. AC (59%) and CH (62%) cohorts included more men than the DRH cohort (25%). Average age was 62, 66, and 51, respectively. History of MDRO, antibiotic use in the past 6 months and hospitalization within the past year were common risk factors (Figure 1). Diabetes and end-stage renal disease were common comorbidities at all facilities (Figure 2). Charleston Comorbidity Index (CCI) score was highest at AC (6.6) and DRH (6.4) compared with CH (4). Mortality was highest in DRH (63%, 6/8) and AC (11%, 7/64) while CH had no deaths. Urine was the most common source at AC (67%) and CH (75%) while blood was most common at DRH (62.5%). CRKp isolates were susceptible to colistin at varying rates (AC=85%, CH = 63%, DRH = 80%).

Figure 1. Common risk factors for CRKp between facilities.

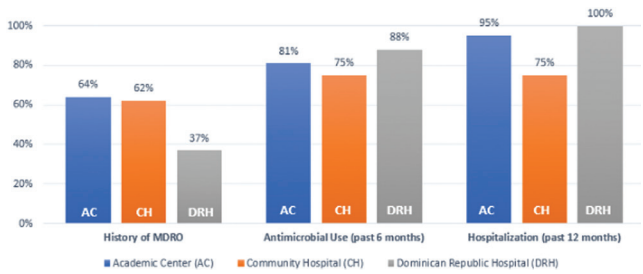
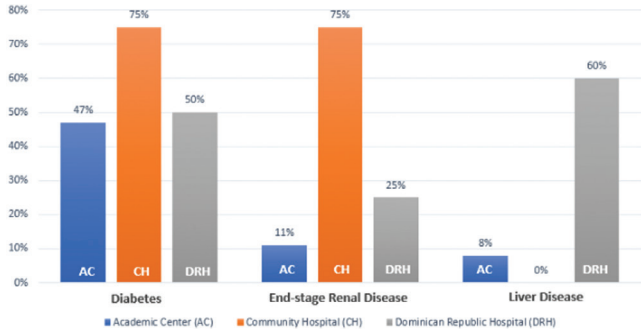


Figure 2. Common patient comorbidities for CRKp between facilities.



Conclusion. Prior antibiotic use and hospitalization were common risk factors in all settings. Mortality and CCI scores for CRKp was highest at AC and DRH, which are tertiary referral centers. CH had less overall mortality and higher rates of colistin resistance. Further studies are needed to understand these risk factors. Strengthening antimicrobial stewardship and infection control practices in the United States and abroad may help curb the spread of resistance in different clinical settings.

Disclosures. **All authors:** No reported disclosures.

1200. Molecular Epidemiology of Cephalosporinases and Extended Spectrum β-Lactamases (ESBLs) in *Proteus mirabilis* Isolates From Croatia: Following the Spread of Resistance Determinants Between Long-Term Care Facilities and the Community

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Session: 136. Healthcare Epidemiology: MDR-Gram Negative Infections
Friday, October 5, 2018: 12:30 PM

Background. Previous studies on *P. mirabilis* strains isolated from Croatian healthcare institutions revealed the predominance of TEM-52 extended spectrum β-lactamase (ESBL), as well as the emergence of plasmid AmpC β-lactamases. Our aim was to molecularly characterize cefalosporinases in *P. mirabilis* isolates from long-term care facilities (LTCFs) and to compare their resistance profile and dynamics with community isolates.

Methods. From a total of 3,321 *P. mirabilis* isolates collected from two LCTFs and from outpatients between 2015 and 2017, 1.23% of them were resistant to third generation of cephalosporins. Antimicrobial sensitivity was tested by broth microdilution method. ESBLs and plasmid-mediated AmpC β-lactamases were detected with phenotypic inhibitor-based tests and polymerase chain reaction (PCR). Antibiotic resistance dissemination and genetic context of *bla* genes were interrogated by conjugal mating and PCR mapping, respectively. Plasmids were characterized by conjugation and transformation experiments, as well as PCR-based replicon typing.

Results. High-level of resistance to amoxicillin, co-amoxiclav, first, second and third generation of cephalosporins was found in all isolates. Three isolates tested positive in inhibitor-based test with clavulanic acid, and 38 both in Hodge test and combined disk test with phenylboronic acid, indicating the production of ESBLs and plasmid-mediated AmpC β-lactamases, respectively. Two ESBL-positive organisms yielded amplicons with primers for CTX-M β-lactamase of group 1 and one for TEM. All AmpC-positive organisms were identified by PCR as CMY (with an additional TEM). Insert sequence IS^{Ecp-1} was found upstream of bla^{CMY}i bla^{CTX-M} genes. CTX-M positive strains harbored IncK plasmid, whereas AmpC-positive strains were negative for known plasmid types. This is also a first description of *P. mirabilis* harboring CTX-M-15 β-lactamase in Croatia.

Conclusion. Our study showed the persistence of CMY β-lactamases in one LTCF, but also the dissemination of characteristic resistance determinants to another LTCF and the community. Similar to some other studies, there was a clear trend of cephalosporinase dynamic switch from TEM variants to CMY and CTX-M, with impending consequences for treatment decisions.

Disclosures. **All authors:** No reported disclosures.

1201. A Prolonged Multispecies Outbreak of Carbapenemase-Producing Enterobacteriaceae Due to Transmissible Plasmid With Carbapenemase Gene

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