

Session: P023 Reducing MDR Gram-negatives - myths and facts

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Infections by pandrug-resistant *Acinetobacter baumannii* in two tertiary care hospitals: clinical characteristics, treatment and outcomes

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Background: The spread of pandrug-resistant (PDR) pathogens worldwide is a public health concern. Although risk factors for infection are known, data on treatment and associated outcomes are very limited.

Material/methods: Retrospective observational study in two tertiary care hospitals, of a total of 1200 beds. All patients with infection by PDR *Acinetobacter baumannii* (AB) from February 2014 through May 2016 were included. Demographics, clinical characteristics, treatment and outcomes were recorded. Data are presented as number (%) or median (interquartile range, IQR).

Results: During the 28-month study period, 47 patients were identified with infection due to PDR-AB; 35 (74.5%) were male, median age was 70 (IQR 53-86) years and median Charlson comorbidity index was 4 (IQR 3-6). Median length of stay prior to infection was 14 days (IQR 7-22) and 38 infections (80.9%) were diagnosed in the Intensive Care Unit (ICU). Most were lower respiratory tract infections (76.6%) and primary bacteremias (14.9%). In 32 infections (68.1%), the initially administered antibiotic regimen was modified after the antibiogram was provided. The most commonly administered antibiotics for final treatment, were colistin (76.6% of infections), tigecycline (68.1%) and carbapenems (29.8%); the most common combination was colistin with tigecycline (61.7%).

The median length of stay after infection was 18 days (IQR 7-38). Death within 30 days from infection was recorded in 21 patients (44.7%). Statistical analysis did not identify any patient characteristics or treatment regimens to be significantly associated with increased mortality. However, among patients

who survived, treatment with either colistin or tigecycline was associated with notably longer hospital stay after infection (Table).

Conclusions: To our knowledge, this is the largest series of infections due to PDR pathogens. The profile of infected patients was characterized by increased age, comorbidities, long hospital stay and ICU stay. Observed mortality was high. Although colistin and tigecycline are considered last resort antibiotics for treatment of infections by antibiotic-resistant organisms, our study showed that they were related with longer hospital stay. This signifies the need to further elucidate optimal treatment of infections by PDR pathogens.

Final regimen	Length of stay after infection (days), median (IQR) ^a		
	Yes	No	p
Carbapenem combinations	35 (5.5-83)	26.5 (18-56)	0.912
Colistin combinations	47 (24-64)	4 (4-37)	0.016
Tigecycline combinations	49.5 (21-64)	18.5 (4-36)	0.066
Colistin & tigecycline combinations (no carbapenem)	52 (31-64)	33 (6-54)	0.153
Carbapenem & colistin & tigecycline	4 (n=2)	37.5 (19.5-62.5)	-
No tigecycline-colistin-carbapenem	4 (n=2)	36 (15.5-60)	-

^a Among 26 patients who survived