Type: Invited Presentation

Final Abstract Number: 04.004
Session: Diagnosis and Treatment of Carbapenem-resistant Enterobacteriaceae
Date: Thursday, March 3, 2016
Time: 10:15-12:15
Room: Hall 5

Appropriate therapy for carbapenem-resistant Enterobacteriaceae (CRE)

O. Abraham

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Abstract: CRE (KPC, NDM-1 and OXA-48 type carbapenemase producers) infections, increasingly encountered across the globe, are associated with substantial (up to 40%) mortality. Treatment options are limited due to in-vitro resistance to virtually all classes of antimicrobials. In-vitro, polymyxins (colistin and polymyxin B) and tigecycline remain active against majority of CRE isolates. Treatment recommendations are difficult to formulate due to absence of evidence from randomized clinical trials, and paucity of published studies on treatment outcomes in infections caused by NDM-1 producers; most of the studies have been on patients with KPC-producing *K pneumoniae* infections. Based on the review of available evidence (in-vitro and observational studies), the following strategies can be recommended for appropriate therapy of CRE infections: Optimal dosing of colistin and carbapenems: A loading dose followed by high-dose extended-interval colistin regimen has been reported to have good efficacy (clinical cure 82%) in treatment of CRE infections. For CRE strains with low MICs (up to 4 μg/ml), prolonged infusion of high-dose carbapenem has been shown to improve free time above MIC required for bactericidal effect of carbapenems. Carbapenem monotherapy may be considered in rare cases of infections caused by CRE strains with low-level carbapenem resistance, with adequate source control. Combination therapy: A recent systematic review has shown that combination therapy (≥2 antimicrobials active in-vitro – colistin with a carbapenem, tigecycline or gentamicin) results in better survival when compared to monotherapy. The mortality was lowest among patients who received carbapenem-containing combinations, and those with lower meropenem MICs.

Tigecycline monotherapy is not considered a good option for treatment of serious CRE infections, as the serum concentrations achieved are well below the MIC of these organisms. CRE isolate remain susceptible to fosfomycin, which could be used for treatment of CRE urinary tract infections.

In summary, optimal dosing and combination of at least two antimicrobials, preferably colistin with a carbapenem seems to be the most appropriate therapy for severe CRE infections.

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Type: Invited Presentation

Final Abstract Number: 05.001
Session: Antifungal Prophylaxis or Treatment - Why, when and what?
Date: Thursday, March 3, 2016
Time: 10:15-12:15
Room: Hall 6

Making clinical sense of candida and aspergillus susceptibilities

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Abstract: (no abstract received from presenter)

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Type: Invited Presentation

Final Abstract Number: 05.002
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Time: 10:15-12:15
Room: Hall 6

Why prophylaxis for invasive fungal infections?

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Abstract: (no abstract received from presenter)

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Type: Invited Presentation

Final Abstract Number: 05.003
Session: Antifungal Prophylaxis or Treatment - Why, when and what?
Date: Thursday, March 3, 2016
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Room: Hall 6

Risk stratification for treatment or prophylaxis of invasive fungal infections

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Abstract: (no abstract received from presenter)

http://dx.doi.org/10.1016/j.ijid.2016.02.041