

O298

Abstract (oral session)

A cohort study comparing outcomes of extended-infusion doripenem to standard infusion imipenem for patients with invasive *Pseudomonas aeruginosa* infections

D. Goff*, K. Bauer, J. West (Columbus, US)

Objective: In the era of escalating carbapenem resistance to *P. aeruginosa*, alternative dosing strategies should be considered. The Antimicrobial Stewardship Program (ASP) evaluated the clinical outcomes of extended-infusion doripenem compared to 30 minute infusions of imipenem for patients with *P. aeruginosa* bacteremia or pneumonia. Methods: Adult patients with a blood culture and or BAL > 10,000 CFU/ml for *P. aeruginosa* who received standard infusion imipenem (0.5 g IV over 30 minutes every 6 h) from Oct-July 2010, were compared to extended infusion doripenem (0.5 g IV over 4 h every 8 h) from Oct- July 2011. Demographic characteristics, Charlson score, mechanical ventilator days, ICU admission, ICU length of stay (LOS), infection related LOS mortality, and hospital costs, were compared. P-values were determined by Fisher's exact or Wilcoxon ranksum test as appropriate. All values are presented as number or percent or median (IQR) as appropriate. Results: 116 patients were identified for inclusion. A trend towards fewer ICU and ventilator days, shorter LOS, lower mortality and hospital costs favored extended infusion doripenem. No differences in demographic characteristics & Charlson score were identified. Conclusions: ASP initial assessment of extended infusion doripenem demonstrates a trend towards improved outcomes and lower costs. In an era of escalating *P. aeruginosa* resistance, ASPs must implement alternative dosing strategies for existing antibiotics to optimize patient outcomes.

	Imipenem (n=65)	Doripenem (n=51)	P-value
Male	46 (71)	31 (61)	0.32
Age, years	58 (42-69)	57 (50-67)	0.98
Days from positive culture to start of therapy	0 (-7-2)	-1 (-5-0)	0.03
Length of Therapy, days	6 (4-12)	7 (4-12)	0.91
LOS, days	28 (15-42)	17 (10-40)	0.21
ICU LOS, days (n=98)	22 (10-39)	21 (8-37)	0.65
Ventilator Days (n=95)	17 (8-40)	13 (7.5-35)	0.43
Infx-related LOS, days	9 (3-14)	9 (5-19)	0.18
Mortality	21 (32)	12 (24)	0.41
Total hospital cost	104,979 (54,044-183,664)	75,983 (34,632-176,895)	0.25