

OPAT with β -lactam antibiotics is effective, but antibiotic switches for adverse events were more frequent with oxacillin use" Lee et al (2015).

Reference:

Lee, B., Tam, I., Weigel, B. 4th., Breeze, J.L., Paulus, J.K., Nelson, J. and Allison, G.M. (2015) Comparative outcomes of β -lactam antibiotics in outpatient parenteral antibiotic therapy: treatment success, readmissions and antibiotic switches. The Journal of Antimicrobial Chemotherapy. May 29th. .

Comparative outcomes of β -lactam antibiotics in OPAT [@ivteam](http://ctt.ec/3bNX8+) #ivteam

Click To Tweet

Abstract:

OBJECTIVES: β -Lactam antibiotics are commonly used in outpatient parenteral antimicrobial therapy (OPAT), but data regarding outcomes of long-term therapy are limited. The purpose of this study was to compare treatment success, readmission and antibiotic switch rates in patients treated with β -lactam antibiotics as OPAT.

METHODS: We carried out a retrospective review of all patients, discharged from Tufts Medical Center with cefazolin, ceftriaxone, ertapenem or oxacillin, between January 2009 and June 2013. A competing risks analysis was used to compare the cumulative incidence of first occurrence of treatment success, antibiotic switch and 30 day readmission for each drug.

RESULTS: Four hundred patients were identified (cefazolin n = 38, ceftriaxone n = 104, ertapenem n = 128 and oxacillin n = 130). Baseline demographics were similar. Treatment success rates were higher for ceftriaxone and ertapenem (cefazolin 61%, ceftriaxone 81%, ertapenem 73% and oxacillin 58%; $P < 0.001$). Thirty-day all-cause readmissions were similar (cefazolin 21%, ceftriaxone 14%, ertapenem 20% and oxacillin 15%; $P = 0.46$). In 400 OPAT courses, 37 out of 50 antibiotic switches were accomplished without readmission. Adverse drug events (ADEs) were the most common reason for outpatient antibiotic switches (31/37, 84%). The ADE rate was higher for the oxacillin group (cefazolin 2.0 versus ceftriaxone 1.5 versus ertapenem 2.9 versus oxacillin 8.4 per 1000 OPAT days; $P < 0.001$).

CONCLUSIONS: OPAT with β -lactam antibiotics is effective, but antibiotic switches for



adverse events were more frequent with oxacillin use. Clinicians should be cognizant of the risk of readmissions and ADEs in OPAT patients, as the value of OPAT lies in reducing patient morbidity and readmissions by managing ADEs and preventing clinical failures.

Thank you to our partners for supporting IVTEAM