

Inpatient Management of Tubo-Ovarian Abscesses: What Is the Threshold of Parenteral Antibiotic Treatment Failure

Introduction: Although parenteral antibiotic treatment is a standard approach for tubo-ovarian abscesses (TOA), a significant proportion fail therapy and require interventional radiology guided drainage (IRD). Unfortunately, there is no consensus of clinical parameters to guide initial treatment approach. The objective of this study is to assess if specific clinical factors are associated with antibiotic treatment failure.

Methods: Retrospective medical record review of patients hospitalized for TOA from 2001 through 2012 was performed. Clinical characteristics were compared for patients undergoing successful parenteral antibiotic treatment only (MED), failed MED requiring IRD (IRD), initial IRD with concurrent MED (IRD-MED), and surgery (SURG) with univariate analyses and multivariate logistic regression models (failed antibiotic treatment versus age, TOA diameter, white blood cell count [WBC]).

Results: 113 patients admitted for inpatient treatment were identified. Demographic factors were similar among groups. Sixty-one (54%) patients initially underwent MED. Within this group, 24.6% failed treatment and required IRD. Mean WBC (18.7 ± 5.94 vs. 13.9 ± 5.12) [$p=0.003$], mean TOA size (maximum diameter [cm]) (6.8 ± 2.9 vs. 5.2 ± 2.0) [$p=0.03$], and length of stay (days) (9.47 ± 7.43 vs. 4.59 ± 2.4) [$p=0.002$] were significantly greater for IRD compared to MED. Respective TOA size for IRD and IRD-MED were similar. Admission WBC greater than 16,000K/uL was predictive of antibiotic treatment failure (odds ratio: 22.0; 95% CI 2.3-201.2, p trend: 0.006).

Conclusion: Admission WBC greater than 16,000K/uL and TOA greater than 5.18 cm are associated with antibiotic treatment failure. Consideration of these factors may provide useful guidance for initial selection of IRD at the time of admission to optimize treatment efficacy.