Prospective, randomized study of ampicillin-sulbactam versus moxifloxacin monotherapy for the treatment of community-acquired complicated intra-abdominal infections.

Chen CW, Ming CC, Ma CJ, Shan YS, Yeh YS, Wang JY.

BACKGROUND: The ideal antimicrobial treatment for intra-abdominal infections (IAIs) in the setting of fast-paced emergency departments (EDs) should be effective, convenient, and of limited resource utilization. Antibiotic monotherapy is a feasible option for this. We conducted a study in which we compared two regimens for antibiotic monotherapy recommended by published guidelines in ED patients with community-acquired, complicated IAIs (cIAIs).

METHODS: The study was a prospective, randomized study of ampicillin-sulbactam versus moxifloxacin for cIAIs. After the diagnosis of cIAI was established, patients were assigned randomly to receive either moxifloxacin 400 mg intravenously (IV) qd followed by moxifloxacin 400 mg orally (PO) qd, or ampicillin-sulbactam 1.5 g IV qid followed by ampicillin-sulbactam 750 mg PO q12h. Source control procedures were used for all patients and all had complete follow-up. The primary efficacy variable for the study was the clinical response at the test-of-cure visit.

RESULTS: A total of 116 patients were enrolled for prospective evaluation and randomized assignment to treatment with ampicillin-sulbactam (n=55) or moxifloxacin (n=61). At the test-of-cure evaluation, the overall clinical failure rate was 13.8%. The clinical failure rates in the ampicillin-sulbactam and moxifloxacin groups were 16.4% (9/55) and 11.5% (7/61), respectively (p=0.446). With regard to infection site, the clinical failure rate in cIAIs consisting of lower gastrointestinal (GI) tract infection was significantly lower in the moxifloxacin than in the ampicillin-sulbactam group (4.3% vs. 19.6%; p=0.024). According to multivariable analysis, independent risk factors for treatment failure were the time to ED presentation >24 h (odds ratio [OR] 6.8; 95% CI 1.3-36.2; p=0.024) and ampicillin-sulbactam therapy (OR 9.5; 95% CI 1.1-76.6; p=0.033).

CONCLUSIONS: A significant difference existed in the clinical responses of the two groups. As compared with ampicillin-sulbactam, moxifloxacin was more effective for the treatment of community-acquired cIAIs of the lower GI tract. A higher risk of treatment failure for antibiotic therapy was found for patients presenting to the ED with symptoms of cIAIs lasting >24 h. Alternative antimicrobial agents should be considered for treating these patients.