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O0421 Results of IGNITE4: a phase-3 study to evaluate the efficacy and safety of eravacycline versus meropenem in complicated intra-abdominal infections

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Background: IGNITE4 is a global, multi-center, double-blind, non-inferiority phase 3 trial conducted to evaluate eravacycline for the treatment of complicated intra-abdominal infections (cIAI).

Materials/methods: Patients were randomized (1:1) to receive eravacycline (1 mg/kg IV q12h) or meropenem (1g IV q8h) for up to 14 days. Clinical outcome at the test of cure visit (TOC, 28 days after randomization) was the primary efficacy endpoint.

Results: 500 patients were randomized [199 (39.8%) complicated appendicitis, 301 (60.2%) other diagnoses including complicated cholecystitis (24%) intestinal perforation (7%), stomach/duodenal perforation (11%)]. Treatment arms were well matched. Baseline isolates were cultured from 400 patients, including *Escherichia coli* (260), *Klebsiella spp*. (62), *Acinetobacter spp* (12) *Pseudomonas aeruginosa* (39), enterococci (146), streptococci (152), *Staphylococcus aureus* (110) and *Bacteroides spp* (182).

Clinical Outcomes at TOC:

Population (N)	Eravacycline % Cure (n)	Meropenem % Cure (n)	Difference	95% CI
Micro-ITT[1] (400)	90.8 (177)	91.2 (187)	-0.5	(-6.3, 5.3)
MITT[2] (499)	92.4 (231)	91.6 (228)	0.8	(-4.1, 5.8)
CE[3] (456)	96.9 (218)	96.1 (222)	0.8	(-2.9, 4.5)

[1]Micro-ITT: at least one baseline pathogen, [2]MITT: received study drug, [3]CE: followed key trial components

For the micro-ITT population, 7 subjects in each arm were clinical failures at TOC manifested as: persistence of clinical symptoms (Eravacycline=1, Meropenem=3), unplanned surgical procedure (5 each), wound infection (Eravacycline=2, Meropenem=0), and rescue antibiotics (6 each).

There were no study-drug related SAEs. Overall 37.2% and 30.9% of patients in the eravacycline and meropenem arms, respectively reported at least 1 TEAE. The most common AEs in both groups were infusion site reactions and gastro-intestinal, occurring in less than 5% of patients.

Conclusions: This study met its primary efficacy endpoint, demonstrating non-inferiority of eravacycline to meropenem in the treatment of cIAI. Treatment with eravacycline was well-tolerated. These data support the use of eravacycline for the treatment of cIAI, including infections caused by pathogens resistant to other antibiotics.

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