

**O0699 Oral fosfomycin for the treatment of non-complicated urinary tract infections among kidney transplant recipients: results from a Spanish multi-centre collaborative cohort**

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**Background:** Oral fosfomycin might constitute an alternative approach for the treatment of non-complicated urinary tract infections (UTI) in kidney transplant recipients (KTR). In a context of a high prevalence of multidrug resistant (MDR) bacteria, this agent could be especially useful to spare the use of broad-spectrum antibiotics. However, little information is available for KTR.

**Materials/methods:** We performed a retrospective study comprising 14 Spanish centers. KTR treated with oral fosfomycin for non-complicated UTI (cystitis or asymptomatic bacteriuria [AB]) between 2005 and 2017 were included. Patients that concomitantly received another active antibiotic were excluded. MDR was defined as acquired resistance to at least one agent in  $\geq 3$  classes of antibiotics. We defined "clinical cure" among patients with cystitis as the remission of attributable symptoms at the end of therapy.

**Results:** A total of 326 KTR (59% females) developed 353 episodes of UTI (cystitis [40.5%], AB [59.5%]) treated with fosfomycin (11.9% following the failure of a previous therapy). Seventy-nine patients (22.4%) had urinary tract instrumentation (double-J ureteral stent [14.4%], urethral catheter [9.6%]). Three hundred thirty-three UTI episodes (94.3%) were produced by Gram-negative bacilli (GNB), of which 53.3% were categorized as MDR (extended-spectrum  $\beta$ -lactamase (ESBL)-producing *Enterobacteriaceae* [15%], carbapenem-resistant GNB [3.3%]). A median dose of 2 g daily of fosfomycin (IQR: 1.5-3) was administered for a median of 7 days (IQR: 3-9). Clinical cure was achieved in 119 patients (84%) treated for cystitis. Among those with an available follow-up urine culture, microbiological cure within the first month was demonstrated in 57% of episodes of AB (79/138) and 70% of cystitis (59/84). We performed a multivariate analysis including previous UTI, previous antibiotic failure in the same episode, carbapenem-resistant or ESBL-producing isolate, to establish factors that predicted microbiological failure. Only infection by ESBL-producing isolate resulted as an independent factor (odds ratio: 2.83; 95% confidence interval: 1.43-5.58;  $p=0.015$ ).

**Conclusions:** Fosfomycin is an effective alternative for the oral treatment of uncomplicated UTI among KTR. This antibiotic could be especially useful to spare the use of broad-spectrum antibiotics for the treatment of cystitis in this population with high incidence of UTI or as a valid alternative when MDR-GNB are isolated.

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