

Retrospective evaluation of intravenous fosfomycin in multi-drug resistant infections

Fosfomycin has resurfaced as a potential therapeutic option for the treatment of antibiotic-resistant bacteria. This study evaluates the clinical and microbiological effectiveness and safety of intravenous fosfomycin.

Species	Percentage
E. coli	40%
Acinetobacter baumannii	32%
Pseudomonas aeruginosa	14%
Enterobacter sp.	7%
Klebsiella pneumoniae	7%

METHODOLOGY

Adult patients who were treated with intravenous fosfomycin for at least 24 hours for any type of infection were included in the study.

We included 28 patients with 31 admissions: two patients received IV fosfomycin more than once.

A total of 30 organisms were identified in 28/31 clinical episodes.

RESULTS

Among 31 episodes treated with IV fosfomycin

68%
favourable clinical response

45%
complete clinical success at End of Therapy

Favourable clinical response assessed by the site of infection:

Pneumonia	100%
UTIs	80%
Bacteremia	65%

Favourable clinical outcome by bacterial species:

Pseudomonas aeruginosa	75%
Acinetobacter baumannii	56%
Enterobacteriales	82%

Microbiological Outcome

Of those with available cultures at end of therapy, 73% achieved microbiological success.

Variable, N(%)	Microbiological eradication	
	At 72 hours	At end of therapy
All patients	9/9 (100)	8/11 (73)
Blood stream infections	7/7 (100)	5/6 (83)
Urinary tract infection	1/1 (100)	3/3 (100)
Pneumonia	1/1 (100)	0/2 (0)

Variable, N(%)	Microbiological eradication	
	At 72 hours	At end of therapy
By organism		
Enterobacteriaceae	6/6 (100)	6/7 (86)
Acinetobacter baumannii	2/2 (100)	3/3 (100)
Pseudomonas aeruginosa	1/1 (100)	0/2 (0)

CONCLUSION

The results suggest that fosfomycin is a safe and effective option for the treatment of MDR organisms. Nevertheless, careful stewardship is important to maintain its efficacy and to reduce the risk of selection of antimicrobial resistance.