



Real-life Experience With IV Fosfomycin in Canada: Results of the CLEAR (Canadian Leadership on Antimicrobial Real-life Usage) Registry

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Introduction

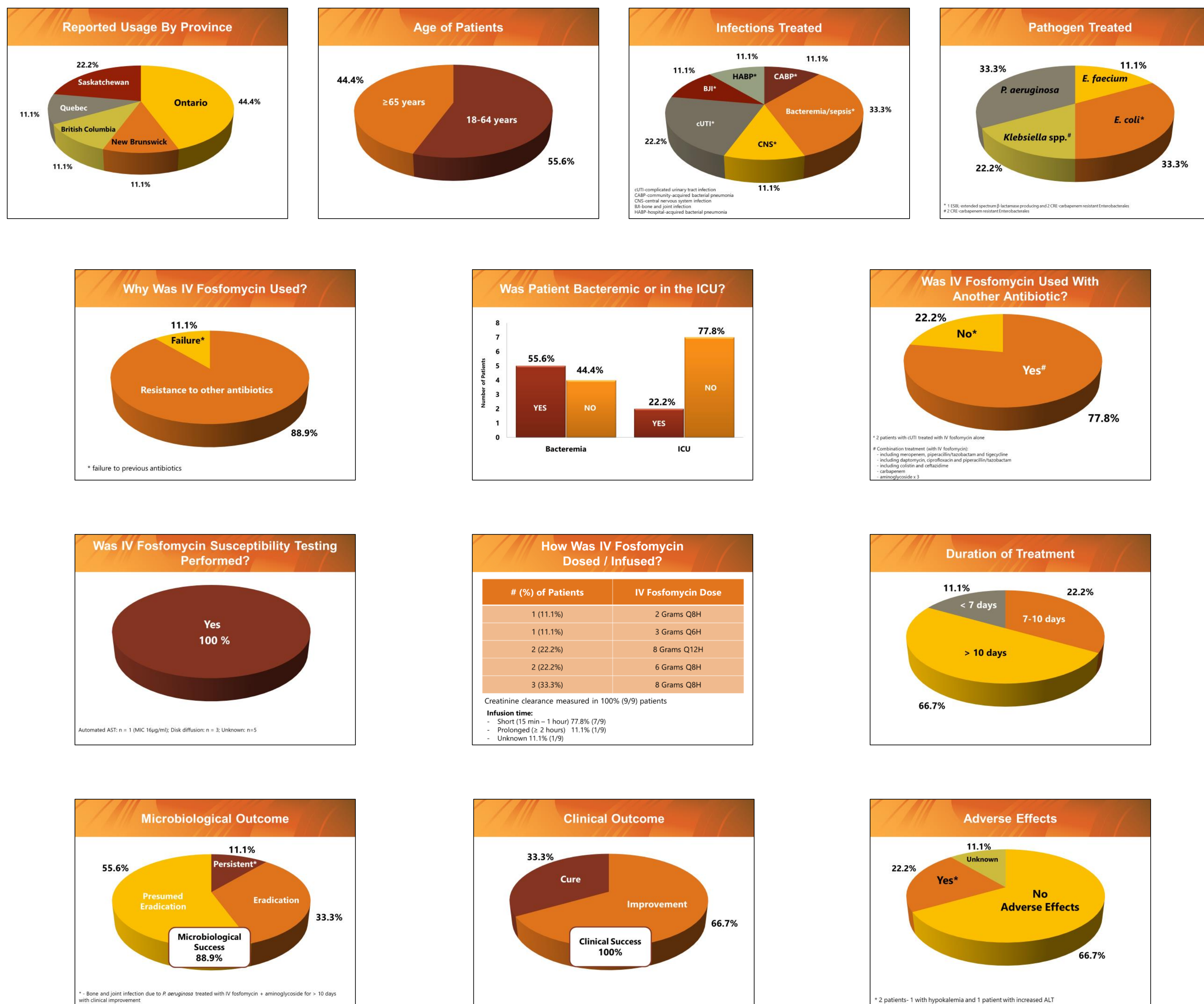
Over the past several years in Canada, when new IV antimicrobials are approved and introduced onto the market, they are used primarily by infectious diseases/medical microbiology specialists and frequently used to treat “off-label” infectious indications. There is commonly limited data sharing between clinicians regarding why they chose to use these new IV antimicrobials (i.e., because of failure, resistance, or adverse effects associated with use of other antimicrobial agents), the types of infections treated, and how (i.e., dosage regimen, duration of therapy, as monotherapy or in combination with one or more other antimicrobial agents) they use new IV antimicrobial agents in real world scenarios. The CLEAR (Canadian Leadership on Antimicrobial Real-life Usage) registry is an initiative coordinated by the Canadian Antimicrobial Resistance Alliance (CARA). CLEAR is a new, national usage registry platform that enables the accumulation of knowledge regarding the clinical usage of new IV antimicrobials recently introduced into the Canadian marketplace. In this study, CLEAR is accumulating data on the usage of IV fosfomycin across Canada. (https://is.gd/CLEAR_IVfosfomycin). CLEAR also has IV ceftobiprole and IV ceftolozane/tazobactam in the registry. Links to access these surveys: https://is.gd/CLEAR_ceftobiprole https://is.gd/CLEAR_ceftolozanetazobactam

Materials and Methods

An IV fosfomycin usage questionnaire was developed using the input of infectious disease/medical microbiology specialists (physicians and pharmacists) across Canada. The CLEAR registry protocol/questionnaire was submitted to and received approval by the Human Ethics Committee at the University of Manitoba (Winnipeg, Canada; April 2019). Using the web-based research data management program, REDCap™ (Research Electronic Data Capture), clinicians (physicians and clinical pharmacists) responded directly to the usage questionnaire online starting June 2019. The REDCap™ online survey link (https://is.gd/CLEAR_IVfosfomycin) was distributed via email to >270 CLEAR participants (members of the Association of Medical Microbiology and Infectious Diseases Canada [AMMI] and Canadian Society of Hospital Pharmacists [CSHP]). Clinicians were sent an email every 2 months encouraging their participation in CLEAR. A series of drop-down menus and short answer questions allowed for rapid (~3 minutes) completion of the survey. Clinicians were encouraged to voluntarily complete usage questionnaires for as many patients as possible. The CLEAR IV fosfomycin questionnaires received by March 15, 2021 were tabulated and results presented are based on 9 patient treatment surveys.

Results

Below are the cumulative tabulated results of the questions asked in the CLEAR IV fosfomycin usage survey questionnaires as of March 15, 2021. The following tables are based on a total of 9 patient treatment surveys.



Conclusions

1. Fosfomycin is used to treat a variety of infections including bacteremia/sepsis, complicated urinary tract infections, central nervous system infections, community-acquired and hospital-acquired bacterial pneumonia
2. Fosfomycin is used to treat Gram-positive and Gram-negative pathogens resistant to other antimicrobials
3. Fosfomycin is primarily used due to resistance to prior used antimicrobials
4. Fosfomycin is used with antimicrobial susceptibility testing
5. Fosfomycin is frequently combined with other antimicrobial agents (except when treating complicated urinary tract infection)
6. The most common IV dosage administered is 8 Grams Q8H administered using a short infusion (15min-1hour)
7. Fosfomycin is frequently used for durations >10 days
8. Fosfomycin treatment is associated with high rates of microbiological and clinical success
9. Fosfomycin was well tolerated however, adverse events were reported in 2 patients (1 patient with hypokalemia and 1 patient with increased ALT)
10. The major limitation of this study is the low patient number

Acknowledgements

The authors thank all the infectious diseases and medical microbiology experts (physicians and pharmacists) across Canada for submitting patient data and for their support of CLEAR.

Verity Pharma provided an unrestricted education grant.

Survey Access

CLEAR – IV fosfomycin link
https://is.gd/CLEAR_IVfosfomycin