

Fosfomycin: Still a Competent Treatment Option in Urinary Tract Infections

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Dear Editor:

We have read the original article entitled “Bacterial profile and Antibiograms in urinary tract infection” by Gupta S, Malakar M, Kalita P and Pandey FK published in Al Ameen J Med Sci 2019;12(4):192-196. We would like to congratulate the authors for this piece of work, and meanwhile make some contributions.

After having analyzed this particular topic, we would like to point that Fosfomycin should also have been included, as being still a first election antibiotic for uncomplicated urinary tract infections (UTIs).

Fosfomycin represents an oral administered phosphonic acid derivate that works by disrupting cell wall synthesis. It's oral administration is recommended in single-dose, as it is renal excreted and reaches efficient concentrations in urine. Recently published studies have proven that Fosfomycin is still effective in fight with UTIs .

A study conducted by Jurałowicz et al. has also pointed that *Escherichia coli* is the most common pathogen causing UTIs, and by analyzing it's sensibility to antibiotics there has been pointed that *E. coli* has had a susceptibility of 95.5% to Fosfomycin among the 387 cases analyzed [1].

Also, Fosfomycin has been used off-the-label and proven efficient in case of complicated UTIs. A review conducted by Zhanel et al. that examined all the available literature regarding the use of

oral Fosfomycin in complicated UTIs, comprising a total of 642 patients, has shown that microbiological cure rates ranged from 52.5% to 78.5%, while clinical cure rates have been situated from 68.9% to 94.3% [2].

A 1-year review of outcomes has been performed in a large municipal healthcare system, examining the efficiency of Fosfomycin use for pyelonephritis and complicated UTIs. It comprised a number of 154 patients, 74% testing positive for *E. coli*. Out of them, 63 have been selected for a 30 days follow-up. This antibiotic has proven to be effective in most of the cases, only 14% of the patients have presented Fosfomycin-resistant strains of this pathogen [3].

Another study conducted over a 4-year period has included data from patients diagnosed with uncomplicated UTIs. The most common pathogen findings were gram-negative bacilli (82%), the most often found pathogen being *E. coli* (67,2%). Maximum sensitivity was found to Fosfomycin, followed by nitrofurantoin for all isolates tested, with an efficiency superior to fluoroquinolones [4].

In conclusion, Fosfomycin still proves to be an aid for fighting with UTIs. Due to its efficiency, safety profile, accessibility and low costs, we consider that this drug should be included in future research related to the subject.

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