Mikrobiyol Bul. 2010 Apr;44(2):311-21.

[Fosfomycin: past, present and future].

[Article in Turkish]

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Source

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Abstract

The continuously increasing problem of multidrug-resistant (extended-spectrum beta-lactamase and/or metallo-beta-lactamase producing) bacteria in recent years has created the need to re-evaluate antibiotic therapy for these infections. Fosfomycin is reconsidered to be an alternative treatment agent for such infections. Fosfomycin was first discovered in Spain in 1969 from cultures of Streptomyces species and originally called phosphonomycin. In the early years, fosfomycin was administered parenterally to the patients with many serious infections including meningitis. In some European countries, fosfomycin is occasionally administered for the initial empirical therapy of sepsis or soft-tissue infections. Although in most European countries fosfomycin has been used for many years, it has become available in clinical use only recently in Turkey. In USA, the Food and Drug Administration (FDA) has approved fosfomycin only for the treatment of patients with uncomplicated cystitis. The use of fosfomycin in the treatment of multidrug-resistant bacterial infections and in the treatment of pediatric cancer patients with fever and neutropenia in combination with other antibiotics, has withdrawn attention to this agent. Fosfomycin has a rapid bactericidal effect and a wide antibacterial spectrum, including methicillin-resistant Staphylococcus aureus, glycopeptide-susceptible or resistant enterococci and a large number of gram-negative pathogens. Since it has a long serum half-life and high concentrations are achieved in urine after oral administration; fosfomycin deserved further consideration for single-dose treatment of urinary tract infections caused by Escherichia coil and Enterococcus faecalis. In this review article the properties, mechanisms of action and resistance, antibacterial spectrum, clinical use, toxicity and adverse reactions of fosfomycin have been summarized.

PMID: 20549968 [PubMed - indexed for MEDLINE]