Orelox (Cefodoxime) in Typhoid Fever

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Abstract

Objective: To study the efficacy of Orelox (Cefodoxime) in Typhoid fever in children.
Settings: Open, non-comparative, multicentre study carried out in GP settings in various cities of Pakistan. Patients: Children aged 1-15 years were included in the study. Positive Widal test was the only diagnostic inclusion criteria.
Results: Four centers participated in the study. Of the total 77 patients (51 males and 26 females), 61 (79%) cured, 5 (7%) improved (less severe signs and symptoms) and 11 (14%) failures.
Conclusion: Treatment of typhoid fever in this study showed 86% efficacy in producing clinical responses suggesting that this drug can be effectively and sefely used in the treatment, of typhoid fever in children (JPMA 49:148, 1999).

Introduction

Salmonella infection remains prevalent in many parts of the world. According to estimates globally there are more than five million episodes of typhoid fever every year[1]. Since the last decade the emergence of drug resistance has become a major problem around the world.
Ampicillin, Chioramphenicol and Co-trimoxazole have been the primary antibiotics used for the treatment of Salmonella infections2. However, Salmonella isolates resistant to all three antibiotics have emerged3-5. A ,good number of Salmonella showed resistance to first line drug i.e., Chloramphenicol (54%), Co-trimoxazole (56%) and Amoxycillin (50%)1. New research studies have shown a high degree of susceptibility of Salmonella isolates to third generation cephalosporins.
Orelox (cefodoxime proxetil) is the pro-drug of cefodoxime, a new third generation cephalosporin. It is active in vitro against a wide range of gram-positive and gram negative bacteria, with increased stability in the presence of beta lactamase enzyme. The bactericidal activity results from its inhibition of cell wall synthesis. The present study was conducted to evaluate the clinical efficacy of Orelox in the treatment of typhoid fever in children.

Patients and Methods

This was an open, non-comparative multi-center study in children in the age range of 1-15 years. Diagnosis of typhoid fever was made on clinical grounds and Positive Widal Test taken as the only diagnostic inclusion criteria. A proforma was made for each patient in which apart from basic parameters like age, sex, weight, symptoms of typhoid like fever, sweats, headache, diarrhea/constipation, abdominal tenderness, hepatosplenomegaly, anorexia and rose spots on the skin were mentioned. After establishing the diagnosis each patient was given Orelox (Cefodoxime) in a dose 8-16 mg/kg/day BID for a period of 10 days. Response to therapy was assessed at the end of the study. It was labeled as CURED when no symptoms were present, IMPROVED when symptoms and signs were present but were less severe than they were on day 1 and FAILURE when both symptoms and signs persisted.
A total of 4 centers participated in the study, which included 77 cases. There were 51 (66%) males and

26 (34%) females. Maximum number of cases i.e., 44 (57%) were below 5 years of age. Out of 77 patients enrolled in the study 61(79%) were cured, 5 (7%) showed improvement and 11 (14%) were failures. For the purpose of analysis cured and improved have been merged together and termed as clinical success rate, which was 86%. Only 3 (4%) reported adverse events i.e., diarrhea that was mild in nature.

Results

The efficacy of Orelox in the treatment of typhoid fever in this study showed an efficacy of 86% in producing clinical response suggesting that this drug can be used safely and effectively in the trealment of typhoid fever in children.

Discussion

Typhoid fever is a common disease encountered in Pakistan especially during the summers. Self-medication due to the availability of over the counter drugs has lead to the development of resistant strains of Salmonella Typhi carrying R-factor coding for CM-resistance[3-6]. Since orofecal route is the mode of transmission so children and adults both get infected during an outbreak of typhoid. Therapeutic regimens are designed to be specific in their antibacterial activity and oral administration is preferable in patients who are not seriously ill. Quinolones along with cephalosporins are the most effective drugs since the emergence of multi-drug resistant Salmonella Typhi, but the use of quinolones is not preferred in children under 16 years of age because of potential toxicity[5]. Third generation cephalosporins therefore remain the only effective therapy for enteric fever in children.
The efficacy of Orelox in the treatment of typhoid fever in this study showed an efficacy of 86% in producing clinical response suggesting that this drug can be used safely and effectively in the treatment of typhoid fever in children.

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