

## Antibiotic resistance in children with bloody diarrhea

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### Abstract

Shigellosis is an important public health problem, especially in developing countries. Antibiotic treatment of bacterial dysentery, aimed at resolving diarrhea or reducing its duration is especially indicated whenever malnutrition is present. First-line drugs include ampicillin and trimethoprim sulfamethoxazole (TMP-SMX); however multidrug-resistance has occurred and careful antibiotic selection must be considered in prescribing. When epidemiologic data indicate a rise in resistancy, fluoroquinolones may be used in adults and oral third-generation cephalosporins and nalidixic acid in children. All children (n=2400) with acute diarrhea who were admitted to the Pediatric department of Dr. sheykh Hospital Mashhad, Iran from March 2004 to March 2006 were selected and their stool culture were obtained, then positive cultures (312 cases, 13%) were evaluated by antibiogram. This study showed that in heavily populated areas of IRAN like Mashhad, 97% shigella strain isolated from children with bloody diarrhea were sensitive to nalidixic acid, ciprofloxacin and cefixime and rarely susceptible to ampicillin and cotrimoxazole. There is increasing resistance of Shigella to most of the antibiotics in use, and for this reason, careful selection of antibiotics must use considered in each area. Development and use of new drugs are expensive and have severe limitations in the third world. Simple prophylactic alternatives are therefore, required, such as awareness of hygienic child care practices and early promotion of breast feeding. For treatment of shigellosis in infants Ceftriaxon, and in children Nalidixic Acid is recommended. © 2009 Tehran University of Medical Sciences. All rights reserved.

### Reaxys Database Information

### Author keywords

Bloody diarrhea; Shigellosis; Stool

### Indexed Keywords

**EMTREE drug terms:** amikacin; amoxicillin; ampicillin; cefalexin; cefixime; ceftriaxone; cephalosporin derivative; chloramphenicol; ciprofloxacin; cotrimoxazole; gentamicin; nalidixic acid; quinolone derivative; tetracycline

**EMTREE medical terms:** antibiotic resistance; antibiotic sensitivity; article; bloody diarrhea; breast feeding; child; drug sensitivity; feces culture; female; human; infant; major clinical study; male; prophylaxis; Shigella; shigellosis

**Chemicals and CAS Registry Numbers:** amikacin, 37017-28-0, 39831-00-0; amoxicillin, 26787-78-0, 34742-77-8, 71377-70-7; ampicillin, 79-02-2, 79-03-4, 7177-48-2, 74083-13-9, 94087-08-0; cefalexin, 10687-71-2, 23320-78-2; cefixime, 79300-37-1; ceftriaxone, 73384-09-0, 74078-79-1; chloramphenicol, 134-90-7, 2787-09-9, 07-70-7; ciprofloxacin, 80721-33-1; cotrimoxazole, 8074-90-2; gentamicin, 1392-48-9, 1403-77-3, 1400-41-0; nalidixic acid, 389-08-2; tetracycline, 23843-90-0, 70-04-8, 74-70-0

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