

Original Paper

## Antibiotic susceptibility of *Yersinia spp* isolated from children with diarrhea

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### Abstract

**Background and Objective:** *Yersinia enterocolitica* is a worldwide pathogen belong to genus *Yersinia*. The association between acute childhood diarrhea and other diseases caused by *Yersinia enterocolitica* has been established by several researchers. Due to the lack of sufficient information on other pathogenic *Yersinia species*, this study was done to determine the prevalence and the pattern of antibiotic susceptibility of atypical *Yersinia spp* isolated from children, less than 14 years old.

**Methods:** This descriptive cross - sectional study was carried on 384 children with diarrhea whom referred to the Tehran children medical center, Tehran, Iran during August 2011 to August 2012. 384 fecal specimens of children were transferred to the laboratory and cold enrichment in alkaline buffer with pH of 7.2 for 21 days. The samples were cultured in Cefsulodin-Irgasan-Novobiocin Agar (CIN) differential media in 7, 14, and 21 days. The identification of *Yersinia species* were carried out by conventional procedure. Antibiotic susceptibility test to Ciprofloxacin, Co-trimoxazole, Tetracycline, Chloramphenicol, Erythromycin, Ampicillin, Gentamicin, Penicillin were determined by standard disk diffusion method.

**Results:** Out of 384 fecal samples, 3 (0.7%) were infected with *Yersinia*. Three species of *Yersinia* were *Yenterocolitica*, *Y.Kristensenii* and *Y.frederiksenii*. All three strains were sensitive to Cotrimoxazole, Tetracycline, Chloramphenicol, Ciprofloxacin and Gentamicin.

**Conclusion:** This study showed that atypical *Yersinia* play important role in diarrhea. Therefore, more attention should be noticed to atypical *Yersinia species* in addition to *Yersinia enterocolitica*.

**Keywords:** Atypical *Yersinia*, Diarrhea, Antibiotic susceptibility, Child

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