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LETTER TO EDITOR

Serratia rubidaea in Urinary Tract Infection

SHOBHA K L

ABSTRACT

Serratia rubidaea causing urinary tract infection is presented here. Although many research studies have shown this organism causing invasive disease, however urinary tract infection by it is rare. An adult presented with symptoms of urinary tract infection and urine sample collected showed cloudy urine. On microscopy, gram-negative coccobacilli were seen with pus cells. Inoculation into culture medium, biochemical tests for identification, and antibiotic sensitivity test showed *S. rubidaea* susceptible to ciprofloxacin, gentamicin, TMP/SMX, netilmycin, amikacin, and cefotaxime. Patient was treated effectively with ciprofloxacin.

Key words: *Serratia rubidaea*, urinary tract infection

Introduction

Serratia is a saprophyte found in water, soil, and food. However, it can lead to serious infections in immunocompromised patients and can also cause urinary tract infections.

Case Report

A 36-year-old male patient presented with fever, urgency, frequency, and burning micturition since 2 days. He had a past history of fracture dislocation L4–L5 with paraplegia 1 month back and was mobilised and treated. The mid-stream urine sample collected was cloudy, and urine microscopy showed gram-negative bacilli and pus cells. Urine sample was inoculated onto Blood agar, MacConkey agar, and CLED medium and incubated overnight at 37°C aerobically. Semiquantitative technique was followed for colony count. After 24 hours of incubation, pure growth of red pigmented colonies with a colony count of 75,000 CFU/ml was done on culture plate. Red pigment was also produced on Nutrient agar. On further testing, it was found to be a motile gram-negative coccobacillus. Biochemical reactions showed catalase-positive, oxidase-negative, ONPG-positive fermented acid with adonitol, arabinose, lactose, raffinose, sucrose, and xylose. It did not ferment sorbitol and rhamnose. Indole was not produced but utilised citrate. It was confirmed as *Serratia rubidaea* by conducting further biochemical tests [1]. Strain was susceptible to ciprofloxacin, gentamicin, TMP/SMX, netilmycin, amikacin, and cefotaxime. Susceptibility performed was according to standardised disc diffusion Kirby–Bauer method [2]. Patient was treated with ciprofloxacin. Repeat mid-stream urine sample after 4 weeks did not yield any growth on the culture medium.

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Discussion

S. rubidaea is a rare organism causing urinary tract infection. Paraplegia could be a predisposing factor for this organism to cause urinary tract infection [3]. Study conducted by Ursva et al. showed *S. rubidaea* as an invasive pathogen isolated from bile and blood of a patient with a bile tract carcinoma [4]. *S. rubidaea* bacteremia was reported by Sekhsokh et al. [5]. Parment et al. reported from silastic form dressing [6].

The relative frequency in clinical specimens is rare, and there are no data to suggest that the organism is of clinical significance, but clinical significance cannot be totally excluded because of its occurrence in clinical specimens [7]. Though *S. rubidaea* causing urinary tract infection is rare, still clinicians must be aware of it as a causative agent of urinary tract infection, especially in immunocompromised patients.

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