

***Shigella Flexneri bacteremia* in Adult**

Sir,

We report an uncommon case of *Shigella bacteremia* in adult with history of dysentery. A 65-year-old nondiabetic, hypertensive male was admitted with complaints of gastroenteritis for 7 days, and fever and pain in abdomen since 3 days. There was a history of chronic kidney disease, dilated cardiomyopathy, and permanent pacemaker device implanted since past 7 years. On examination, the patient was febrile (38.4°C) and hemodynamically stable. Laboratory investigation revealed a hemoglobin level of 11.9 g/dL, platelet count of $205 \times 10^9/L$ and high total leukocyte count ($18.3 \times 10^9/L$). Blood urea nitrogen was 68 mg/dL and

serum creatinine 3.9 mg/dL. On echocardiography, ejection fraction was of 30%. Ultrasonography of abdomen showed the presence of cortical cyst in the right kidney. Colonoscopy done showed extensive ulceration in left colon suggestive of acute ulcerative colitis. The stool examination revealed the presence of occult blood. Stool, urine and two blood samples were sent for the aerobic culture. No growth was observed in the urine and stool culture. *Shigella flexneri* grew in both the blood culture samples with the same antibiotic susceptibility pattern. Patient was treated initially with Injection ciprofloxacin, metronidazole for 4 days, and then Injection cefoperazone sulbactam was added. However, patient did not respond even after 48 h of treatment. Then these antimicrobials were discontinued by physicians and injection meropenem was started. Patient started responding; his total count decreased and became afebrile. Subsequent blood cultures were negative. Blood cultures were processed by automated method (BactALert 240).^[1] The identification and sensitivity was performed by conventional as well as by automated method (Vitek2 compact, Biomerieux).^[2] The isolate was found sensitive to cefoperazone sulbactam, piperacillin tazobactam, cefepime, imipenem, meropenem, and resistant to ceftriaxone, ciprofloxacin, trimethoprim sulfamethoxazole. On serotyping that was done at National Institute of Cholera and Enteric Diseases, Kolkata, it was found to be *S. flexneri* type 3a.

Though an invasive disease, it usually do not reach the tissue beyond the lamina propria and hence very rarely cause bacteremia and positive blood cultures except under very special circumstances like immunocompromised status. Since the mechanism of bacteremia remains unclear, invasiveness may be associated with a mixture of soluble bacterial proteins encoded by a 140-MD plasmid.^[3] For the bacteriological diagnosis of *Shigella* enteritis only stool culture has practical value. Scragg and Rubidge reported *S. bacteremia* cases who were stool culture negative.^[1] In our case also, the blood but not the stool culture was positive. Common *sp* implicated in cases of septicaemia is *Shigella dysenteriae* type 1^[4] In the reported case, it is due to *S. flexneri* type 3a. On pubmed literature search, there were limited reports of *S. bacteremia* in children with no case report in adult from India.^[5]

Thus, though *S. bacteremia* is a rare phenomenon, it does occur. Prompt and frequent cultures of blood are recommended especially where either the patient is immunocompromised or febrile with diarrhea. This may be of great significance in determining the treatment and the outcome of the disease.

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REFERENCES

1. Scragg JN, Rubidge CJ, Appelbaum PC. Shigella infection in African and Indian children with special reference to Shigella septicaemia. J Pediatr 1978;93:796-7.
2. Clinical And Laboratory Standards Institute: M100-S21 Performance Standards for Antimicrobial Susceptibility testing, Twentieth Informational Supplement. Wayne PA: CLSI; 2010.
3. Bello CS, Al-Barki AA, El-Awad ME, Patel RV. *Shigella flexneri* bacteremia in a child. Saudi Med J 2003;24:403-5.
4. Morduchowicz G, Huminer D, Siegman-Igra Y, Drucker M, Block CS, Pitlik SD. *Shigella* bacteremia in adults. A report of five cases and review of literature. Arch Intern Med 1987;147:2034-7.
5. Saraswathi K, De A, Jog A, Gogate A. *Shigella* septicemia. Indian Pediatrics 2002;39:777-9.

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