

# Shigella Septicaemia in An Infant

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## Introduction

Shigellosis has a global distribution and is one of the important pathogens responsible for bacterial dysentery which is a common diarrhoeal disease of the developing countries<sup>1</sup>. The infection is transmitted by faecal oral route. The prevalence of the disease is highest in the developing countries with bad hygienic conditions and poor sanitation<sup>2</sup>. The disease is usually ushered in with fever followed by the onset of watery diarrhoea which turns to bloody with or without the other signs and symptoms of dysentery. Local or systemic manifestations may complicate the illness. Systemic complications include bacteremia and septicemia with the infecting strain especially in malnourished, young, weaned infants. Shigella septicemia is not a common complication. We observed a case of shigella septicemia which is presented here.

## Case Report

A 10 months old child, resident of rural area of Tehsil Kharian, presented with loose motions, vomiting, fever and fits off and on of one month duration. The frequency of stools was 5-6 times per day without blood. The child was bottle fed. On examination, the child was lethargic, pale dehydrated, had a temperature of 100°F and pulse rate of 140/mm. His chest was clinically clear and abdomen was soft. At the time of admission, his blood urea was 26.4 mmol/l, Na 132 mmol/l, potassium 5.2 mmol/l, creatinine 308 umol/l, blood glucose 4.1 mmol/l, serum calcium 7.6 mg/dl, Hb 8.1 g/dl, TLC 13.5x10<sup>9</sup>/l, differential Count with neutrophils 80%, lymphocytes 16%, monocytes 1%, eosinophils 03% and plain X-ray chest was normal. His stool and blood revealed on culture, Shigella flexnerii serotype 2. The Shigella flexnerii was resistant to ampicillin, cotrimoxazole and tetracycline and sensitive to chloramphenicol, ciprofloxacin, cephmdine and ceftizoxime. The child was administered Ringer's solution and Glucose 5% along with chloramphenicol 175 mg IV 6 hourly. Six days after admission he became afebrile and after 7 days all the laboratory tests became normal. He was discharged from the hospital with advice to continue oral chloramphenicol for further 7 days.

## Discussion

Shigellosis is an acute inflammation of the intestinal tract caused by species of Gram negative genus Shigella. The transmission of Shigella species normally occurs by the direct anal-oral route, although water and food supplies are involved in some outbreaks of bacterial dysentery. Extra-intestinal presentations of shigellosis is quite rare. Systemic complications include bacteremia with the infecting strain especially in malnourished young weaned infants and occasionally resulting in disseminated intravenous coagulopathy<sup>3,4</sup>. Leukemoid reaction<sup>5</sup>, or the haemolytic syndrome<sup>6</sup>. Infants and children are more prone to develop shigellosis and its complications, presumably because of lack of pre-existing immunity and greater likelihood that the children will transfer the organism via the faecal-oral route<sup>7</sup>. Although bacteremia and septicemia may not be a common feature of shigellosis but it is reported by many workers<sup>3,6</sup>. Struelens et al, isolated shigellae from blood in 4.1% (n=82) from patients with

shigellosis. The prevalence of all bacteremia was highest in the first year of life. Patients at the highest risk of death from shigella bactemmia were less than one year old, non-breast fed, malnourished and febrile<sup>6</sup>. The disease is self-limiting in many cases and antimicrobial usage does not seem to shorten the duration of symptoms or hospital stay<sup>8</sup>, but when the child develops bacteremia and septicemia, antimicrobials may play a role in controlling the infection and reducing the mortality rate. Although the isolate was sensitive to chloramphenicol but it was resistant to many antibiotics like ampicillin, cotrimoxazole and tetracycline. The resistance of shigellae in our set-up is constantly changing<sup>9</sup> and we may find no choice of antimicrobial, particularly for such serious situations.

## References

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