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Case Report

Splenic Abscess in Enteric Fever-A Rare Presentation

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ABSTRACT

Splenic abscess is rare in children, with only a few reported cases in the literature. Enteric splenic abscess is even rarer. Enteric splenic abscess frequently presents subtly, with vague symptoms and signs, making diagnosis challenging. We report a 5-year-old boy with typhoid fever who developed multiple splenic abscesses and was successfully managed with a conservative approach.

Keywords: Splenic abscess; Salmonella typhi; Children

INTRODUCTION

Since the advent of early antibiotics, splenic abscesses caused by Salmonella typhi are a rare consequence of typhoid fever. It is a potentially fatal complication of typhoid fever in developing countries.[1] The incidence of a splenic abscess in typhoid fever has been reported to be between 0.29-2%.[2] Predisposing conditions, including hemoglobinopathies, are typically present in these patients.[3] We are reporting a case of a splenic abscess that was caused by Salmonella typhi in a previously healthy five-year-old male.

CASE REPORT

A 5-year-old male was admitted to our hospital with a history of fever not associated with chills, decreased appetite, and distension of the abdomen. On abdominal examination, it was found that there was no tenderness and no evidence of free fluid, the liver was palpable 3 cm below the subcostal margin, and the spleen was palpable 2.5 cm

along the log axis. The rest of the systemic examination was normal. His hematology profile was hemoglobin 9.3 gm/dl; Total Leucocyte Counts (TLC) 6800 cells/mm^3, and Differential Leukocyte Count (DLC): Neutrophils 43, Lymphocytes 46, Eosinophils 06, and Monocytes 05. SGOT/SGPT 408 /164 U/L.

The child was managed on lines of fever of unknown origin and started on intravenous (IV) ceftriaxone and oral antipyretics. Peripheral smear did not reveal malaria parasite, rickettsial serology was negative, and blood culture revealed Salmonella typhi. Widal was positive with 1:256 titers. Ultrasound (USG) abdomen done at admission did not reveal any abnormalities.

On the day of admission 5, the child had a passage of blood in stools with clots. A contrast-enhanced computerized tomography scan (CECT) of the abdomen was done. CECT abdomen showed an enlarged Liver (11.4 cm) and Spleen (10.2 cm), with multiple relatively well-defined round to oval peripheral non-enhancing hypodense areas in splenic parenchyma, the largest measuring 2.1×2.8×2 cm in the upper pole likely evolving abscess and infective terminal ileo colitis. (Figure 1,2,3)

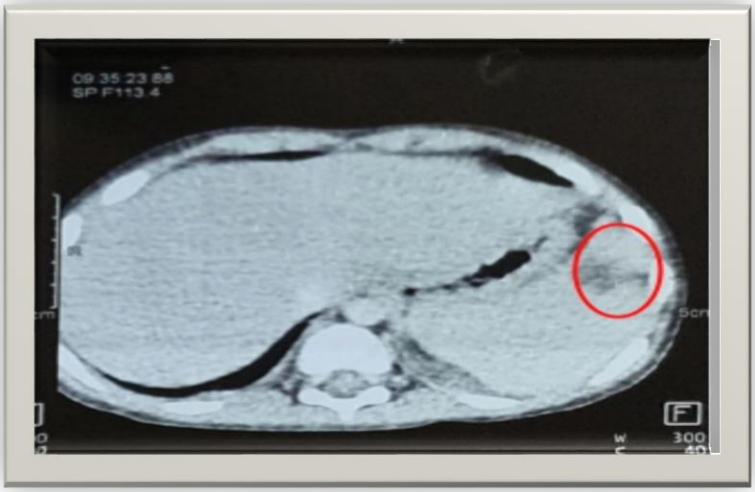

Figure 1: Axial section at the level of spleen showing hypodense peripherally enhancing lesion in inferior pole of spleen.

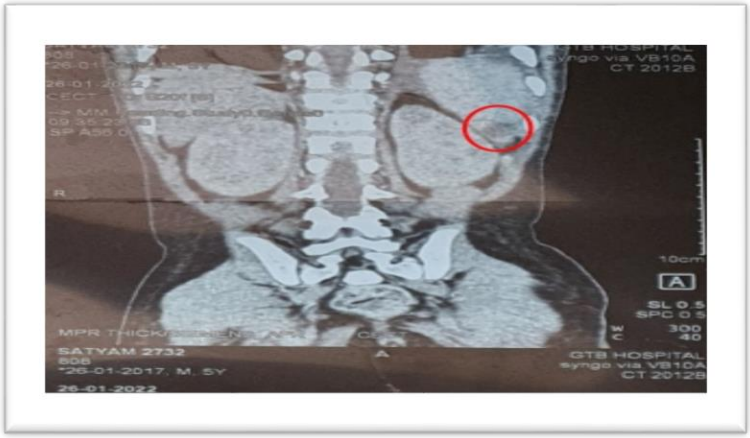

Figure 2: Coronal section showing hypodense peripherally enhancing lesion in inferior pole of spleen.

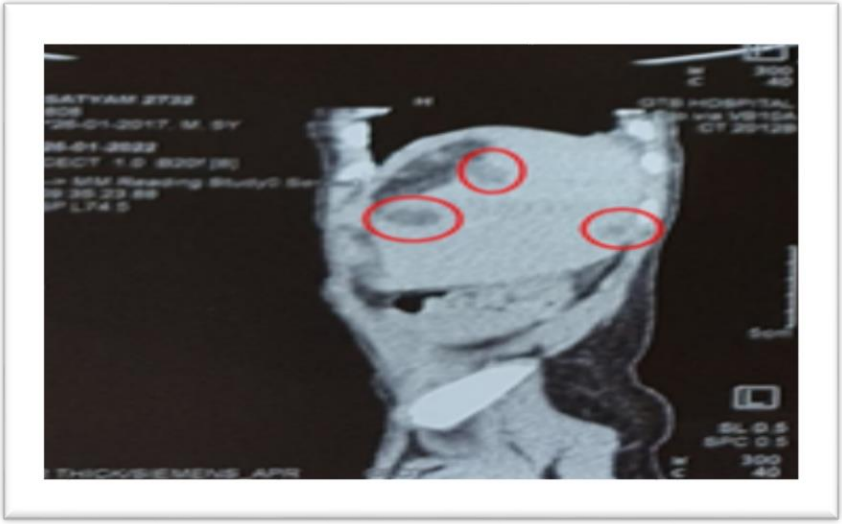

Figure 3: Sagittal section showing multiple hypodense non enhancing lesions in spleen.

The child's antibiotics were upgraded to meropenem and vancomycin. The child received IV antibiotics for 21 days. A repeat ultrasonography (USG) abdomen was done, which was normal upon antibiotic complication. The patient responded favorably in terms of general well-being and with regression of the lesion.

No predisposing factor was found in our case. Echocardiography (ECHO) was normal; the sickling test was negative. Tuberculosis and Human Immunodeficiency Virus (HIV) workups were negative.

DISCUSSION

Splenic abscess is a rare complication of typhoid fever. The hepatobiliary system and the spleen are the frequent sites of extraintestinal Salmonella abdominal infections.[1]

There have been only a few documented cases of splenic abscesses in the literature, and they are mostly solitary, with only a few being multiple. One case was reported by Bhongle N. et al.[4] in India, which involved a healthy 14-year-old female who had multiple splenic abscesses with no predisposing factors. Another case was reported by Naranje K. et al.[5] in which a 6-year-old girl had multiple splenic abscesses. In our case, the patient had multiple splenic abscesses.

Impairment of host resistance, subacute bacterial endocarditis, trauma, diabetes mellitus, urinary tract infection, skin sepsis, respiratory tract infection, intravenous drug misuse, and sickle cell disease are frequently contributing factors to the development of splenic abscess. Multiple splenic abscesses are more commonly reported in immune-deficient hosts and have poor prognosis.[1.6] In our case, none of these risk factors were present.

Ultrasonography of the abdomen is frequently the first test required to show the lesion, whereas CECT of the abdomen is necessary to detect the extent of the abscess and outline extremely small abscesses.[6] In our situation, the CECT abdomen revealed the diagnosis.

The spleen should be preserved in children by using a conservative strategy that includes intravenous antibiotics and percutaneous aspiration.[7] Only those who don't respond to conservative therapy should undergo splenectomy.[8] Treatment should be prompt since it is often fatal if left untreated.[9] Our case was managed conservatively and responded well to the conservative management.

CONCLUSION

Because of its rarity, insidious onset, and unclear clinical presentation, splenic abscess due to enteric fever is extremely difficult to diagnose. While there are a number of new infections on the horizon, it's important to keep an eye on uncommon presentations of a common disease. Non-invasive modalities like USG and CECT are useful for early diagnosis of splenic abscess.

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