However, despite antibiotic therapy, fever, abdominal pain and abdominal tenderness persisted. Abdominal ultrasound (US) revealed multiple hypoechoic areas in the spleen; the largest being 42 mm in diameter. Computed tomography (CT) findings (Fig.1) corroborated with the diagnosis of multiple splenic abscesses. Sickling test and HIV screen were negative. Splenectomy was performed since multiple splenic abscesses were inappropriate for percutaneous drainage.

Case 2

A ten-year-old male child presented with high grade, remittent fever for the last one month and pain abdomen for last 7 days. On examination, the boy had a toxic look, was irritable and febrile (103°F). He had mild tachypnea and tachycardia. There was diffuse abdominal tenderness, more marked over the left hypochondrium. There was moderate hepatosplenomegaly. Laboratory tests demonstrated: hemoglobin 9.0 g/dL and white blood cells count of 19,200/mm3 (36% neutrophils, 54% lymphocytes). Serum urea, creatinine levels and urinary analysis were normal. The Widal test was positive at 1 in 160 dilution. Cultures of the blood, urine and stool were sterile. Abdominal ultrasound revealed a space occupying cystic lesion in the spleen measuring 5.5 × 4.9 cm. The child was started on Ceftriaxone and Ofloxacin. Percutaneous splenic aspiration yielded 70 mL of pus. Culture of the pus revealed the growth of *S. typhi*. After apparent initial improvement, the child was febrile again with pain abdomen on day 8 of admission. Repeat US examination showed a similar cystic lesion in the spleen measuring 4.8 × 4.4 cm. Conservative surgery which included deroofing of the abscess cavity was done. The boy improved subsequently and repeat US at the end of two weeks showed complete resolution of the abscess.

Discussion

Splenic abscess as a complication of typhoid fever is a distinct rarity. The more common causes of splenic abscess are infection due to Staphy-
lococcus species and Bacteriodes(3). Non
typhoidal salmonella are more frequently
reported than S. typhi. Factors leading to the
development of splenic abscess are usually
impaired host resistance, subacute bacterial
endocarditic, trauma, diabetes mellitus, urinary
tract infection, skin sepsis, respiratory tract
infection and intravenous drug abuse(2). Sickle
cell disease is also present in about one-third of
patients with splenic abscesses(4). Multiple
splenic abscesses are found in immuno-deficient
patients (especially HIV positives) who have poor prognosis(1).

A few cases with multiple splenic abscesses
caused by S. typhi are described in the literature.
Allal, et al.(2) reported 400 patients with S. typhi
and found splenic abscess in 8 (2%) cases; of these
only one had multiple splenic abscess. Torres,
et al.(5) documented 10 cases of typhoidal solitary
splenic abscesses.

In splenic abscess, CT evaluation is more
specific than US evaluation in delineating gas
bubbles, which is diagnostic for splenic abscess, in
visualizing the peripheral contrast enhancement
and in providing clear demonstration of the
location of the abscesses(2). MRI may reveal
some clues in the diagnosis by defining the
extent and internal structure of splenic abscess
because of its greater tissue resolution(6).

Until recently, the treatment of splenic
abscesses was splenectomy with antibiotic
therapy. The recent trends are more
conservative because the immunologic role of
the spleen has been better understood over the
last years(7). Solitary unilocular abscesses may
respond well to percutaneous drainage. Multiple
or loculated abscesses may respond to
antibiotics alone(8) but splenectomy is the
preferred treatment(1). In general, failure to
respond to antibiotics with or without
percutaneous drainage necessitates
splenectomy(8).

In conclusion, splenic abscess should be
considered as a complication of enteric fever when
fever and toxicity does not abate with adequate
antimicrobial therapy, especially when the child
has localizing clinical features i.e., left hypochondrial pain, scoliosis etc. Non-invasive imaging
modalities including US, CT and MRI are useful
for early diagnosis of splenic abscess.
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REFERENCES


