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Case report

Surgery

Enteric fever presenting as splenic abscess: A rare presentation of enteric fever

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Abstract

Introduction

Isolated splenic abscess is a rare complication of enteric fever in developing countries. The condition often has a non-specific clinical presentation. Mostly the abscess is solitary rather than being multiple. Here we report a case of a child with enteric fever who presented with multiple splenic abscesses.

Case report

A 12-year male patient had presented with high grade fever and pain localized to left hypochondrium. Widal test was found to be positive. Ultrasound and CT abdomen revealed multiple abscesses in spleen. Following failure of medical management and percutaneous aspiration the patient was cured by splenectomy.

Conclusion

Splenic abscess is a rare complication of enteric fever. It may be managed with antibiotics with or without percutaneous aspiration as a first line of treatment but splenectomy should be considered in cases refractory to medical management.

Introduction

Splenic abscess is an uncommon condition with about 600 cases being reported in international literature[1,2], most of which were associated with liver abscess. Isolated splenic abscess due to enteric fever is very rare [3,4], most of them being solitary than multiple [2]. The following case report is rare as this was a case of multiple abscesses in spleen caused by enteric fever which was cured by splenectomy and intravenous antibiotics.

Case Report

A 12 year old male patient with average built presented with complaints of high grade fever which was sudden in onset with chills and rigor. Patient had generalised malaise and had pain abdomen localized to left upper abdomen for last 2 days. There was no history of diarrhoea, vomiting, chronic fever, respiratory distress; or alteration in urinary and bowel habits. There was no history of any cardiac pathology, I.V. drug abuse or trauma. There was no significant personal and family history of diabetes mellitus, tuberculosis, cardiac disease; or hemoglobinopathies like sickle cell disease. At the time of presentation examination revealed that the patient was febrile (103 F) with chills. Abdominal tenderness was present in the left hypochondrium with splenomegaly. No skin rash, lymphadenopathy or bony tenderness was seen.

Laboratory tests demonstrated Hb 10.2 gm/ dl; total leucocytes count 16300 cells /cu mm with 83% polymorphs, 13% lymphocytes. Blood urea, serum creatinine and serum bilirubin were within normal limits. Blood smear was negative for malaria parasite and blood culture was sterile. Widal test was positive with titre for 'O' antigen being positive up to 1/320 and 'H' antigen being positive up to 1/320. HBsAg and HIV ELISA tests were negative. Abdominal ultrasound revealed splenomegaly with two foci of abscess of size 5x3 cm and 4x3 cm in mid and lower poles. Following this Contrast Enhanced CT (CECT) scan of abdomen was done which revealed multiple splenic abscesses deforming the contour of spleen (Figure 1). Ultrasound guided aspiration of abscess was done but was unrewarding due to thick abscess. Patient was started on intravenous ceftriaxone and ofloxacin but fever did not respond to I.V. antibiotics. Abdominal tenderness increased in severity over the next 2 days. Because of failure of medical management and inability to aspirate percutaneously splenectomy was planned. During exploratory laparotomy adhesions of omentum with the spleen were noticed. Multiple abscess cavities were found in spleen; two of them were already ruptured (Figure 2) but sequestrated by omentum. There was no associated perisplenic collection. Pus culture from the abscess cavity confirmed Salmonella typhi to be the causative organism. Postoperative recovery was uneventful with I.V. antibiotics coverage of ceftriaxone and ofloxacin. Histopathological examination of spleen revealed multiple areas of necrosis surrounded by acute inflammatory exudates.

Discussion

Abscess within spleen is an unusual condition[5]. Occurrence of splenic abscess due to typhoid fever is very rare. Allal et al[4] reported 400 patients with S. Typhi and found splenic abscess only in 8(2%) of the cases. Out of this only one had multiple splenic abscesses (0.25%). The above report indicates the rare occurrence of multiple splenic abscesses due to Salmonella typhi as reported in our patient.

The various pathogenesis of splenic abscess are: [1, 2]

1. Systemic bacteraemia which may be caused by conditions like infective endocarditis, intravenous drug abuse, osteomyelitis, pneumonia, pelvic infection, urinary tract infection, enteric fever etc.

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2. Superinfection of spleen damaged by ischaemia, infarction (due to haemoglobinopathies like sickle cell disease) and trauma.
3. Immunosupression as in A.I.D.S., steroid therapy, diabetes mellitus.
4. Contiguous spread from pancreatic, subphrenic and perinephric abscess.

Clinically splenic abscess as a complication of enteric fever presents insidiously with non-specific clinical presentation and also because of its rarity the diagnosis is difficult. The cases reported in literature had history of gradual onset of signs and symptoms like diarrhea, fever, left upper abdomen pain, anorexia, nausea, etc in various combinations [5], for 2 weeks or more, but our case had only 2 days history of high grade fever associated with pain abdomen. Most of the splenic abscess reported in literature had associated risk factors as mentioned above but in this case no risk factor had been found.

Splenic abscess in this case most likely developed via seeding from bacteraemia following Salmonella typhi infection, all other factors which cause splenic abscess had been ruled out. Blood culture was negative which may be explained by the fact that at the time of blood sampling I.V. antibiotic had already been started.

The triad of splenic abscess presentation includes fever, left upper quadrant pain and a tender mass and has been observed in about 1/3rd of all cases. Ultrasonography and C.T. scan are gold standard for early diagnosis[6]. C.T. scan also demonstrates the number and locations of abscess site along with other concomitant conditions like liver abscess, pleural effusion, etc which are useful regarding management[7].

Splenic abscess can be managed conservatively for preserving spleen, by percutaneous aspiration or catheter drainage under C.T. scan guidance[8]. If abscess is unresponsive to percutaneous drainage then splenectomy is the next appropriate step. Splenic abscess if left untreated may rupture into peritoneal, pleural cavity or bowel and thus may have a worse prognosis.

Splenic abscess is a potentially lethal condition with mortality rates as high as 40% due to delay in diagnosis and initiation of specific treatment[1,2]. Splenic abscess can present acutely and one should have high degree of suspicion in a febrile patient with tender splenomegaly.

Conclusion

Splenic abscess is a rare and often unrecognized complication of enteric fever. It may be treated with antibiotics with or without percutaneous aspiration as a first line of treatment but splenectomy should be considered in cases not responding to medical management.

References

1.Ng CY, Leong EC, Chang HC. Ten-year series of splenic abscesses in a general hospital in Singapore. Ann Acad Med Singapore. 2008; 37: 749-52.

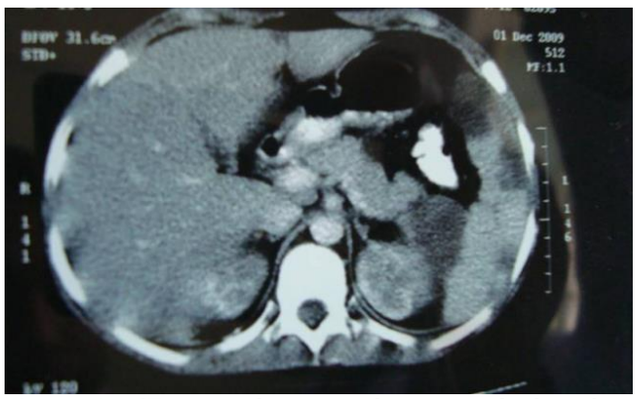

Figure 1: CT scan of patient showing multiple splenic abscesses.

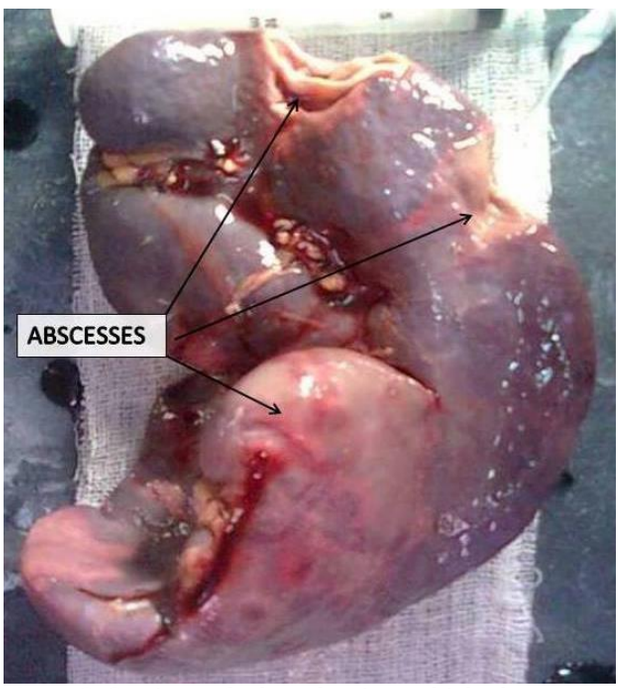

Figure 2: Specimen of spleen showing multiple abscesses.

2.Fotiadis C, Lavranos G, Patapis P, Karatzas G. Abscesses of the spleen: report of three cases. World J Gastroenterol. 2008; 14: 3088-91.
3.Duggal S, Mahajan RK, Biswas NK, Chandel DS, Duggal N, Hans C. Splenic abscess due to Salmonella enterica Serotype typhi in a young adult. J Commun Dis. 2008; 40: 219-22.
4.Allal R, Kastler B, Gangi A, Bensaid AH, Bouali O, Cherrak C, et al.. Splenic abscesses in typhoid fever: US and CT studies. J Comput Assist Tomogr. 1993; 17: 90-3.
5.Chang KC, Chuah SK, Changchien CS, Tsai TL, Lu SN, Chiu YC, et al.Clinical characteristics and prognostic factors of splenic abscess: a review of 67 cases in a single medical center of Taiwan. World J Gastroenterol. 2006; 12:460-4.
6.Tung CC, Chen FC, Lo CJ. Splenic abscess: an easily overlooked disease? Am Surg. 2006; 72:322-5.
7.Joazlina ZY, Wastie ML, Ariffin N. Computed tomography of focal splenic lesions in patients presenting with fever. Singapore Med J. 2006; 47:37-41.

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8.Zerem E, Bergsland J. Ultrasound guided percutaneous treatment for splenic abscesses: the significance in treatment of critically ill patients. World J Gastroenterol. 2006; 12:7341-5.

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