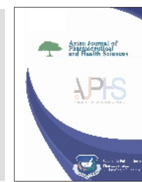
Asian Journal of Pharmaceutical and Health Sciences

www.ajphs.com



Pyoperitoneum secondary to paraspinal cold abscess rupture

Rudrajit Paul*[1], Amit Kr Das[2]

1 Assistant Professor, 2 Resident

Department of Medicine, Medical College Kolkata, The West Bengal University of Health Sciences.

ARTICLE HISTORY

Received: 01.01.2014

Accepted: 07.02.2014

Available online: 10.05.2014

Keywords:

Pyoperitoneum, Cold abscess, Peritoneal lavage, Fever

***Corresponding author:**

Email : docr89@gmail.com

Tel.: 91-9433824341

ABSTRACT

Pyoperitoneum or pus in the abdominal cavityis a rare condition resulting from infected wounds in the abdomen or rupture of an abscess. It is a potentially serious medical condition with high mortality. Tuberculosis is known to cause ascites and abdominal adhesions. It may also cause abscess in intra-abdominal organs like spleen. However, pyoperitoneum secondary to tuberculosis is very rare. We here report a case of a young 26 year old Indian female with no comorbid illness presenting with tubercular pyoperitoneum. She presented with progressive abdominal pain and fever. Ultrasonography showed exudates and floating debris in abdominal cavity. The pus tested positive for AFB in ZN stain. She also had neurological signs for which MRI was done which revealed Pott's spine with surrounding leaking abscess. Thus the pyoperitoneum was secondary to rupture of paraspinal cold abscess.The patient was treated with immediate peritoneal lavage followed by four drug oral anti-tubercular therapy. She responded to the treatment with slow disappearance of abdominal exudates; however the neurological signs remained. The case is reported for its rarity. This is probably the first such case to be reported from India. Relevant literature regarding pyoperitoneum is also discussed at length.

INTRODUCTION

Pyoperitoneum or pus in the abdominal cavity is a rare condition which may present as a medical emergency. It can occur as a complication of surgery or after rupture of intra-abdominal abscess [1]. It is usually associated with high mortality [1]. We here report a very rare case of pyoperitoneum due to rupture of tubercular abscess into the abdomen. As far as we searched, this is probably the first such case to be reported from India.

THE CASE REPORT

A 26 year old unmarried non-alcoholic non-smoker female presented with bilateral leg weakness for two months and progressive abdominal pain for one month. She did not have any significant past history and there was no history of trauma to the abdomen. There was mild evening rise of temperature and loss of appetite over six months. On examination, the patient was in severe pain and lying still in bed. Her pulse was 130/min, regular and blood pressure was 100/66 mm of Hg. The abdomen was tender on superficial palpation and peristaltic sounds were absent. She also complained of a pain in mid back region, which was aggravated by coughing. Power in her lower limbs was 2/5 and she also complained of constipation. However, there were no bladder problems. The abdomen was distended and surface temperature was raised. There was no other lymphadenopathy. Chest examination was normal. Because of the severe abdominal pain, the patient could not turn in bed. Hence vertebral palpation was not done. Sensory loss was found upto the T10 level and lower limb jerks were all brisk.

Laboratory examinations revealed hemoglobin of 8.3 gm/dl with total count of 18000/mm^3 and 82% neutrophils. ESR was 120 mm in 1st hour. Blood sugar/urea/creatinine came as 106/22/1.3 mg/dl respectively. Liver function test revealed bilirubin of 1.3 mg/dl with SGOT/SGPT of 33 and 41 IU/L respectively. Alkaline phosphatase was raised at 309 (N<250) IU/L. Serum albumin/globulin was 2.7/4.9 mg/dl respectively. Mantoux test was positive at 20 mm. Ultrasonography of abdomen revealed septate collection all over the abdomen with echogenic floating debris, suggestive of inflammatory exudates. Straight X ray of abdomen revealed ground glass appearance with no free air under diaphragm. Aspiration from the peritoneum revealed frank pus with no foul smell. It was sent for tests, which found AFB positive in ZN stain. Bacteriological culture was negative.

Meanwhile, for the back pain, MRI spine with contrast was done, which revealed inflammatory destruction of D6 to D10 vertebrae with large paraspinal abscess. There was also evidence of rupture of abscess. The picture (Fig. 1) was suggestive of Pott's

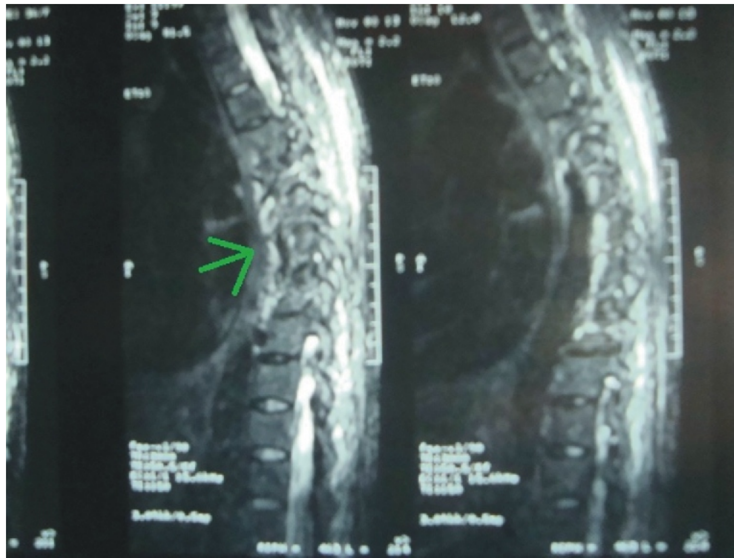


Fig. 1 :

spine. The patient was found negative for HIV serology and other tests like serum Anti-nuclear factor were also negative. Chest X ray was normal.

The patient was treated with peritoneal lavage with normal saline and started on anti tubercular drug (4 drugs). Immediate spinal surgery was not done due to unstable condition. Due to the pyoperitoneum, imipenem cilastatin and metronidazole were also given intravenously. After three weeks of treatment, the abdominal pain and fever disappeared and repeat ultrasonography also revealed disappearance of exudates. However, she could not still walk and the back pain persisted. She was transferred to neurosurgery department.

DISCUSSION

Pyoperitoneum usually presents with high fever and systemic toxic features [1]. Examination of the abdomen reveals signs of peritonitis with ileus. However, in our patient, although local signs were found, systemic features were largely absent. This may be due to chronic nature of tubercular infection.

In India, tuberculosis is often a cause of exudative ascites. However, frank pus in abdomen secondary to tuberculosis is hardly reported. A case was reported from Hong Kong where the patient presented with acute abdomen after rupture of mesenteric cold abscess [2]. The case was treated with laparotomy and drainage followed by anti-tubercular chemotherapy [2]. In severe cases, surgical intervention is needed. Often, preoperative diagnosis is not possible and peritoneal biopsy done at the time of surgery reveals the diagnosis. Paravertebral cold abscess is very common association with Pott's spine. This abscess may rupture or track down unusual sites and give rise to atypical features like progressive airway obstruction [3].

Intra-abdominal tubercular infection can be in the form as peritonitis or localized abscess in organs like liver or spleen [4]. It is usually found in immunodeficient patients but our case did not have any recognizable cause of immunodeficiency. Sometimes, the cold abscess can also form a large retroperitoneal mass, compressing the aorta and causing hemodynamic compromise [5]. Treatment of intra-abdominal tuberculosis is like other sites. But in cases of abscess, surgical drainage is needed. Our case responded to medical therapy alone as far as abdominal collection is concerned.

CONCLUSION

In endemic regions of the world, tuberculosis may cause a variety of clinical features including abscesses at unusual locations. Especially in a patient who has an abscess with comparatively few other clinical features, tuberculosis is a strong possibility. Any abscess or pyogenic infection which fails to respond to regular antibacterial agents, especially in India, should be investigated to rule out tuberculosis.

REFERENCES

1. Kumar S, Jain S. Peritonitis and fulminant sepsisdue to spontaneous ruptureofilio-psoas abscess. Indian J Gastroenterol2004;23: 222-3
2. Cheung HY, Siu WT, Yau KK, Ku CF, Li MK.Acute abdomen: an unusual case of ruptured tuberculous mesenteric abscess.Surg Infect (Larchmt). 2005;6:259-61
3. Pollard BA, El-BeheiryH.Pott's disease with unstable cervical spine, retropharyngeal cold abscess and progressive airway obstruction.Can J Anaesth. 1999;46:772-5
4. Valencia ME, Moreno V, Soriano V, Laguna F, Adrados M, Ortega A et al. Tuberculous hepatosplenic abscess, human immunodeficiency virus infection and multiresistant tuberculosis. Rev Clin Esp. 1996;196 :816-20
5. Singh PK, Azam A, Singh VK, Tomar J, Mishra A, Singh Kk et al. Massive retroperitoneal tubercular abscess mimicking a leaking abdominal aortic aneurysm: a case report. Cases Journal 2008, 1:236