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Amoebic Peritonitis Associated with Cirrhosis of Liver: A Case Report

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ABSTRACT

Introduction: Amoebic peritonitis is due to the rupture of amoebic liver abscess or perforation of amoebic colitis. Amoebic peritonitis is associated with very high mortality. **Methodology:** A case of amoebic peritonitis is reported in a young adult female with liver cirrhosis. The diagnosis of amoebic peritonitis was established by the demonstration of trophozoites in the ascitic fluid and significant titres in indirect haemagglutination test.

Result: Cytopathological examination of peritoneal fluid showed presence of large number of trophozoites of *E. histolytica*. Anti *E. histolytica* serum antibodies by indirect haemagglutination(IHA) were present in titres 1:320.

Conclusion: A high index of suspicion in any case of colitis along with serological testing is indicated for the early diagnosis and timely management.

Key Words: Amoebic peritonitis, Perforative peritonitis, *E. Histolytica*.

INTRODUCTION

Amoebiasis is a parasitic infection caused by protozoan *Entamoeba histolytica*. Infection by *E. histolytica* is endemic in Indian subcontinent with as high as 67% prevalence rate.^[1] Invasive amoebiasis is associated with significant morbidity and mortality in areas endemic for *E. histolytica*.^[2] Colonic perforation, liver abscess, pleural and pericardial effusion, enteric fistulae and amoeboma formation are some of the complications of invasive amoebiasis.^[3] Amoebic peritonitis is most often due to the rupture of amoebic liver abscess. Nearly 22% cases of Amoebic liver abscess can rupture to give peritonitis.^[4,5] The colonic perforation cases are extremely rare.^[6] Here we report a fatal case of amoebic peritonitis affecting young adult female patient.

CASE REPORT

A 38 year old female was admitted with history of distension of abdomen since two months and pedal oedema since

10 days. She had diarrhoea and abdominal pain since three months. There was no history of fever, haematemesis, melena or convulsions. No history suggestive of tuberculosis, Diabetes mellitus, hypertension and receiving blood transfusion in past. On physical examination she had icterus and abdominal distension with tenderness. There was no lymphadenopathy. On examination, RS, CVS and CNS were normal. Laboratory investigations showed that the total leucocytes count was 13300 with polymorphs 70%, Lymphocytes 25%, Eosinophils and monocytes 3% and 2% respectively. Liver function tests showed significant rise in total bilirubin and raised SGOT (78IU/mL) and SGPT (148 IU/mL). Serum creatinine was 3mg/dl and blood urea was 68mg%. HIV, HBsAg, HCV and HAV serology was negative. The alpha fetoproteins were raised (87.75IU/mL) where as beta chorionic gonadotrophins were within normal range. USG abdomen revealed splenomegaly, nodular liver with irregular surface and liver parenchymal disease consistent with cirrhosis of liver and gross ascites. CT scan of abdomen was suggestive of cirrhosis of liver with changes of portal hypertension. The aspirated ascitic fluid was dark yellow with alkaline pH and

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sugar 102%. Cytopathological examination of peritoneal fluid showed presence of RBCs, WBCs and large number of trophozoites of *E. histolytica*. Anti *E. histolytica* serum antibodies by indirect haemagglutination(IHA) were present in titres 1:320.

The patient was treated with parenteral Metronidazole and a third generation cephalosporin, Ceftriaxone. However, the patient did not show any response to the treatment, developed acute renal failure and died on the 6th day of admission. An autopsy was performed which confirmed the diagnosis of cirrhosis liver; however colonic invasion was not substantiated on autopsy.

DISCUSSION

Amoebic peritonitis could be either due to rupture of amoebic liver abscess into peritoneum or due to perforation of invasive amoebic colitis.^[5] Ruptured Amoebic liver abscess is the most common cause of amoebic peritonitis accounting for 22 to 32% cases.^[4,5]

Perforation with peritonitis is uncommon and reported in 3 to 5 % autopsies on patients dying of amoebiasis.^[6] Incidence of perforation in amoebic colitis is around 2% with a high mortality rate regardless of the treatment.^[7] Amoebiasis is the most common cause of colonic perforation besides TB and malignancy.^[8]

The present case was diagnosed as Amoebic peritonitis on the basis of presence of trophozoite forms of *E. histolytica* in ascitic fluid and positive IHA test. However, there was no clinical evidence of amoebic liver abscess or bowel perforation in though the patient had symptoms suggestive of amoebic colitis. Fever, chronic diarrhoea and abdominal pain are the main presenting symptoms in invasive amoebiasis. As Ultrasonography revealed presence of findings consistent with cirrhosis, the ascites was attributed to the cirrhotic changes in liver parenchyma and altered liver function. In the absence of any indication of liver abscess and presence of trophozoites in the ascetic fluid along with positive IHA test, the diagnosis of amoebic peritonitis secondary to bowel leak was entertained. The amoebic peritonitis may be caused by either frank perforation or through a slow leak through diseased bowel.^[9,2,3] There are three forms of perforation, an extraperitoneal sealed perforation, a perforation of amoebic ulcer or amoeboma and a perforation in the presence of

acute dysentery. Extra-intestinal disease via haematogenous spread to the liver, lung, brain and rarely other organs is reported in invasive amoebiasis.

High mortality is reported in amoebic peritonitis secondary to bowel perforation as compared to rupture of amoebic liver abscess.

In the present case, the diagnosis of amoebic peritonitis was established by the demonstration of trophozoites in the ascitic fluid and significant titres in indirect haemagglutination test. Serologic testing for amoebiasis is highly specific, the IHA is considered as the most specific test.^[10]

CONCLUSION

Considering the high endemicity of the disease and high fatality rate of amoebic colitis^[2], a high index of suspicion in any case of colitis along with serological testing is indicated for the early diagnosis and timely management.

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