Case Report

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Infected hepatic cyst: an unusual differential diagnosis of peptic perforation

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ABSTRACT

Perforated peptic ulcer has many presentations with most cases presenting with pneumoperitoneum and signs of peritonitis. Here we report a case where preoperative evaluation suggested the presence of cyst associated with liver which intraoperatively revealed localized abscess secondary to peptic perforation. A 40 year old male patient presented with a tender lump confined to epigastrium and right hypochondrium, episodic vomiting, intermittent fever along with yellowish discoloration of sclera and urine for 10 days. CECT abdomen showed cystic lesion in left lobe of liver communicating with a loculated cavity which was present in association with right lobe of liver. Among the various diagnoses suggested was an infected hepatic cyst or liver abscess. During surgery there was a cystic collection of about 2 liters of pus between under surface of liver and stomach forming a pseudocyst. After draining the cavity two pinpoint perforations were found on the first part of duodenum. Omental patch repair of the perforation was done after freshening of margins with an uneventful postoperative period. CT scanning with oral contrast is the most valuable imaging technique for making an immediate and correct diagnosis of GI tract perforation especially in cases with negative X-ray and USG. On CECT abdomen hepatic cyst has sharply demarcated wall and is non-enhancing while liver abscess shows well demarcated hypodense areas with peripheral enhancement which may contain gas. The findings of the case show that although peptic perforation in itself is very common but it can have such a peculiar presentation.

Keywords: Hepatic cyst, Liver abscess, Peptic, Perforation

INTRODUCTION

Gastrointestinal tract perforation is an emergency condition requiring immediate surgery. Perforation in peptic ulcer is one of the most common causes of gastrointestinal tract perforation and it has many presentations. Most present cases pneumoperitoneum, pancreatitis or less commonly lesser sac abscess. Other unusual cases may be associated with pneumopericardium, subcutaneous emphysema, splenic abscess, tension pneumothorax, gastropleural fistula, gastropancreatic gastrobronchial fistula, fistula, gastroenteral fistula, and penetration into the heart and aorta.¹ Here study report a case where preoperative evaluation suggested the presence of cyst associated with both lobes of liver which intra-operatively revealed abscess due to peptic perforation.

CASE REPORT

A 40 year old presented with complaints of pain abdomen confined to epigastrium and right hypochondrium, episodic vomiting, intermittent fever along with yellowish discoloration of sclera and urine for 10 days. The patient had a history of blunt trauma to abdomen about 2 months back due to fall following which he had

an uneventful recovery. On further examination patient had a tender lump in epigastrium region. Rest of the abdominal examination was found to be normal.



Figure 1: CECT abdomen picture.

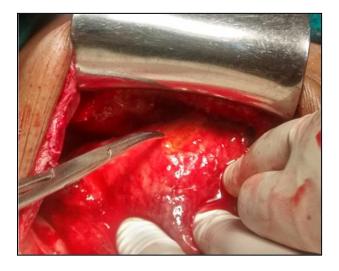


Figure 2: Intra-operative picture of pinpoint perforations.

On routine blood investigations total leucocyte count was 16,000/ mm³. Also patient had jaundice with bilirubin > 10 mg/dL with increase in both direct and indirect bilirubin levels. Other routine blood investigations were normal. Abdominal X-ray was normal. For further evaluation an ultrasonography of the abdomen was done which revealed cystic collection with septations adjoining the liver. As the diagnosis was still questionable Computed Tomography of the whole abdomen was done which revealed peripheral cystic lesion of size 86X70X67 mm in left lobe of liver communicating with a loculated cavity of size 109X120X98 mm which was present in association with right lobe of liver (Figure 1).

Among the various diagnoses which were suggested by the radiologists was an infected hepatic cyst or liver abscess. Also the cause of jaundice was noted to be compression of common bile duct by the cystic lesion. Although the diagnosis was still uncertain, based on the above mentioned preoperative findings it was decided to perform a laparotomy. On exploration by a midline incision, it was noticed that there was a cystic collection of pus containing about 2 liters of fluid in the lesser sac. After draining the cavity we found 2 pinpoint perforations in the first part of duodenum on the anterior surface (Figure 2). Thorough peritoneal lavage was performed with saline and omental patch repair of the perforation was done after freshening of margins. The patient had an uneventful postoperative period.

DISCUSSION

Perforation occurs in 2-10% of patients with peptic ulcer and accounts for more than 70% of deaths associated with peptic ulcer disease. Often perforation is the first clinical presentation of peptic ulcer disease.² The perforation site usually involves the anterior wall of the duodenum (60%), although it might occur antral (20%) and lesser-curvature gastric ulcers (20%).³

Patients with gastroduodenal perforation usually present with acute abdominal pain and signs of peritoneal irritation from leakage of acidic gastric contents. However, physical examination findings may be equivocal, and peritonitis may be minimal or absent, particularly in patients with contained leaks.⁴

Free gas under the diaphragm found on an upright chest X-ray is indicative of hollow organ perforation and requires urgent exploration after resuscitation. CT scanning with oral contrast has been established as the most valuable imaging technique for making an immediate and correct diagnosis of GI tract perforation especially in cases with negative X-ray and USG. Suspicious findings on CT scan include unexplained intraperitoneal fluid, pneumoperitoneum, bowel wall thickening, discontinuation of GI wall, extravasation of contrast and abrupt GI wall thickening with or without an associated phlegmon, inflammatory mass or abscess.^{5,6}

In this case, the discontinuity of GI wall was not observed probably due to small size of the perforated duodenal ulcer. On CECT abdomen hepatic cyst shows sharply demarcated wall, water density and is non-enhancing while liver abscess has well demarcated hypodense areas with peripheral enhancement which may contain gas.

Management of peptic perforation includes conservative treatment, open and laparoscopic surgery. In the era of H. pylori therapy and acid reducing medications, up to 90% of perforations may be treated with simple closure with or without omental patch (Graham patch). The procedure can be performed either by open surgery or using laparoscopic approach. Hepatic-related complications of a perforated gastric ulcer, such as liver abscess, upper gastrointestinal hemorrhage, subcapsular liver abscess, or even liver rupture, are uncommon and usually diagnosed at autopsy. As per our knowledge there is no case report showing such an unusual presentation of doudenal perforation.

CONCLUSION

The basic purpose of highlighting this rare case is that although peptic perforation in itself is very common but with such peculiar presentation it is difficult to diagnose preoperatively and hence can pose a diagnostic challenge both for the surgeon and the radiologist.

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