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Gall Bladder Perforation Due to ESBL Salmonella Typhi a Rare Case Report

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Abstract

Gall bladder perforation is a rare complication of acute cholecystitis [1].Perforation of gall bladder due to salmonella typhi is even rarer. Pre op diagnosis is often difficult and needs a high degree of suspicion. We report a case of 34 year old gentleman coming from south Asia who presented with acute abdomen. CT had no findings except for small amount of fluid near the liver and haziness pf the mesentery. Patient was taken up for diagnostic laparoscopy based on his clinical condition with rising inflammatory marker and unsettling pain.

Case Report

34-year-old male from south Asia presented the emergency department with complains of acute abdominal pain for few hours. There were no associated symptoms. He gave past history of some epigastric pain otherwise no significant past surgical or medical history. He denied having any fever.

On examination he had very tender abdomen with generalized guarding and rigidity with signs of peritonitis .X ray revealed no gas under the diaphragm, CT scan done showed thickened gall bladder with pericholecystic fluid collection and some fluid around the liver and a large area of ground glass attenuation seen at the root of mesentery associated with congested mesenteric vessels & few small mesenteric lymph nodes.

On presentation he had leukocytosis but his inflammatory markers were normal.

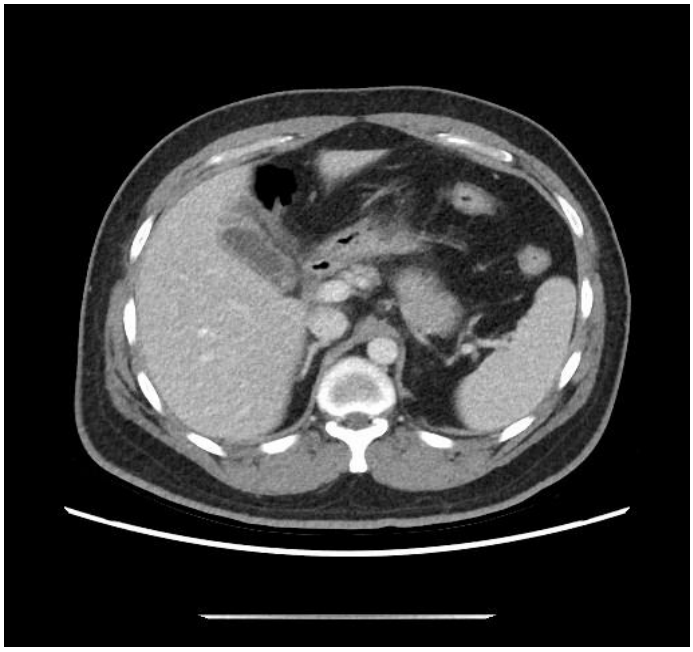
Patient was taken up for emergency diagnostic laparoscopic based on his clinical findings of severe tenderness and rigidity.

Intraoperative there was gall bladder perforation at the fundus with gall stones, severe wall thickening and inflammation. Peritoneal cavity was full of clear bile with fibrin, no pus. Severe adhesions between colon and omentum to the liver.

Laparoscopic cholecystectomy with washout was done. Drains were placed.

Patient was started on broad spectrum antibiotics.

The culture of the peritoneal fluid grew (ESBL POSITIVE) Salmonella ser. Typhi Patient was the started on meropenem which was given for 10 days based on Infectious disease unit recommendation. Post operatively patient improved and was discharged after the course of antibiotics.



Discussion

Gallbladder perforation is an uncommon but potentially life-threatening condition. One of the most common causes of gallbladder perforation is acute calculous cholecystitis. Although rare, it can also occur in acalculous cholecystitis . Less common causes include perforation secondary to Ascaris lumbricoides infection of the biliary tract, trauma, tuberculosis, and typhoid/enteric fever The most common site is the distal part of the gallbladder due to its blood supply.

Typhoid fever, caused by Salmonella enterica seroptype Typhi (S typhi), has an estimated worldwide prevalence of 12–33 million cases. The pathogenesis of this disease depends on the ingested inoculum size of S typhi, the virulence of the strain, the host's immune response and previous exposure, and local protective factors. Numerous extra-intestinal complications can occur with S typhi infection, including the involvement of the central nervous system (3–35%), cardiovascular system (1–5%), pulmonary system (1–86%), bone and joints (1%), hepatobiliary system (1–26%), genitourinary system (1%)

Typhoid fever is a disease occurring more commonly among people after travel to, or residence in, developing countries where sanitation is poor and where there is fecal contamination of food and water. Human beings become infected with S typhi through ingestion of fecal contaminated food, milk, or water. 1–5% of infected people become chronic carriers by harboring S typhi in the gall bladder, despite antibiotic therapy.

Salmonella concentrations in the epithelial cells of the gallbladder can exceed those in the liver and spleen, which can lead to perforation as well . There is a high mortality rate in gallbladder perforation (around 12%-16%) as compared to the intestinal perforation in enteric fever. Early diagnosis and immediate surgery followed by antibiotics is the treatment of choice, which was done in our case.

Conclusion

Gall bladder perforation due to salmonella typhi is a rare occurrence.

CT and ultrasound lack sensitivity and specificity. High clinical suspicion and early surgery is a key to the management of gall bladder perforation and prevents morbidity and mortality.

It is also emphasized that clinical examination is very important and should not be replaced by radiology. As in our case the CT scan was not conclusive, and patient was taken up for surgery based on clinical examination.

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