EMPHYSEMATOUS CHOLECYSTITIS

Colecistite enfisematosa

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INTRODUCTION

Emphysematous (gas-forming) infections of the abdomen represent potentially life-threatening conditions that require aggressive medical and often surgical management. Emphysematous cholecystitis (EC) is an uncommon variant of acute cholecystitis in which the causative organisms are gas-forming bacteria. EC has been defined clinically by the imaging demonstration of air in the gallbladder lumen, in the wall, or in the tissues adjacent to the wall of the gallbladder; and elsewhere in the biliary ducts in the absence of an abnormal communication with the gastrointestinal tract. EC is pathophysiologically different from acute or chronic cholecystitis. Obstruction of the gallbladder neck secondary to cholelithiasis induces acute and chronic cholecystitis. However, EC mostly results from thrombosis or occlusion of the cystic artery with ischemic necrosis of the gallbladder wall.

CASE REPORT

A 30-year-old man without previous diseases was admitted because of right upper quadrant pain and nausea. On admission the patient was febrile (38.7°C) with normal bilirubin levels. The white blood count was 26700/μl and reactive protein C (RPC) was 470. Axial sections of single slice computed tomography imaging (section thickness 5 mm), revealed gallbladder wall enhancement after i.v. contrast, as well as dilatation of the gallbladder with intraluminal air (Figure 1). The patient underwent open cholecystectomy. The culture of the bile showed Clostridium perfringens. The postoperative course of the patient was uneventful.

DISCUSSION

EC is a virulent form of acute cholecystitis. It usually affects elderly men (2:1), and it is associated with diabetes mellitus and arteriosclerosis. Vascular compromise of the cystic artery is thought to play a significant role in the evolution of the emphysematous form of this disease, likely explaining its male predilection1,2. In comparison with all cases of acute cholecystitis, EC is associated with an
increased prevalence of acalculous disease and gallbladder perforation. The risk of gangrene of the gallbladder is relatively high, and mortality rates may reach 15%.

Commonly isolated organisms include Clostridium welchii, Clostridium perfringens and Escherichia coli. The presenting symptoms of EC are frequently very vague, clinical manifestation is often insidious and may then progress rapidly, requiring emergent surgical intervention. The clinical presentation may adopt different forms, from minimal pain to septic shock, and unusual signs such as subcutaneous infections, pneumoperitoneum, and obstructive jaundice. The succeeding symptoms and signs depend on the evolution of the disease. CT is the most sensitive and specific imaging modality for identifying gas within the gallbladder lumen or wall. Intravenously and orally administered contrast agents are usually not required.

Treatment includes prompt surgery, with cholecystectomy been the definitive one, although percutaneous cholecystostomy may be used as an initial temporizing procedure in critically ill patients. In addition to surgery, broad-spectrum antimicrobial therapy, and correction of associated underlying conditions such as acid-base and electrolyte imbalances, hypovolemia, and hyperglycemia must be considered.

CONCLUSION

EC is a rare form of cholecystitis that carries a high mortality and usually present insidious clinical signs. Vascular occlusion may be very important in the development of the disease. CT is the most accurate imaging technique. Antibiotic therapy should begin quickly and include coverage of common pathogens, particularly Clostridia. Surgical intervention should take place as early as possible.

REFERENCES


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