

Acute Surgical Abdomen

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An acute surgical abdomen is defined as sudden onset of severe abdominal pain due to inflammation, obstruction, infarction or perforation of any abdominal organs. Since 1989, laparoscopy has been used to diagnose as well as treat such acute surgical problems. Three common acute surgical conditions are discussed; cholecystitis, appendicitis and diverticulitis.

Acute cholecystitis presents with right upper quadrant pain often post fatty meal, associated with fever, chills, nausea, vomiting and even jaundice. Ultrasound and or HIDA scan is used to confirm the diagnosis. Treatment is bowel rest, IV antibiotics to cover E coli and Klebsiella organisms. If symptoms are less than 72 hours an urgent laparoscopic cholecystectomy is performed. Symptoms greater than 72 hours may be treated with IV antibiotics and an elective interval laparoscopic cholecystectomy in 4-6 weeks later. If there is concurrent abnormal liver function tests, a preoperative endoscopic ultrasound (EUS) or MRCP should be performed to rule out common bile duct (CBD) stones. Asian patients are more prone to having concomitant common bile duct stones due to hemolysis or liver flukes. A preoperative ERCP is performed to remove the CBD stones.

Acute appendicitis is the most common cause of acute surgical abdomen. Classic presentation is periumbilical pain which later radiates

to the right lower quadrant and subsequently associated with fever, nausea, vomiting and anorexia. Work up with abdominal CT is the best diagnostic test. An urgent laparoscopic appendectomy would be indicated unless there is a perforation along with an abscess. This may be then treated with IV antibiotics, primarily to cover Bacteroides and E coli, and percutaneous drainage of the abscess. An interval laparoscopic appendectomy may be performed in 6-8 weeks.

Diverticulosis increases with age but only small percentage will actually develop diverticulitis. The first attack is the most likely to present with a free perforation. It often presents with left lower quadrant pain, constipation and bloating sensation. A CT scan confirms and stages the severity of the disease. Majority of the cases may be treated with IV antibiotics to cover for Bacteroides and E coli, however, for free perforation, a Hartmann procedure is indicated (resection of the diseased bowel with a proximal end colostomy and closure of the distal stump). The Hartmann procedure is reversed laparoscopically in 3 months.

Asians have a higher incidence of cecal diverticulitis and this mimics acute appendicitis. This type of diverticulum is a true diverticulum and generally is solitary and congenital. If diagnosed by CT scan, majority of the cases can be treated with bowel rest and IV antibiotics. If diagnosed intraoperatively, an appendectomy is performed and patient is treated with IV antibiotics postoperatively.