

## **Post operative intra abdominal abscess**

Clinical presentation & general epidemiology: Intra-abdominal abscess refers to a localized collection of pus in the abdominal cavity which is outlined by an inflammatory wall (1). It can be either within the peritoneal cavity or in the retroperitoneum. A number of causes can lead to the development of intra-abdominal abscess, including abdominal surgery, trauma, and infective/inflammatory pathologies (2). Post-surgical intra-abdominal abscess formation is a major cause of morbidity and mortality in surgical patients. Post-operative pneumoperitoneum is common after abdominal surgeries; however, persistence of air even after a week of surgery should always make the clinician as well as the radiologist suspicious of post-operative complications such as intra-abdominal abscesses. Persistence of free air or an increase in the amount of air in the post-operative patient might be an early sign of infection by anaerobic gas forming organisms such as E. coli, Klebsiella, Proteus, Clostridium, and Candida. These patients usually present with high-grade fever and abdominal pain. Depending upon the site and size of the abscess, other clinical features such as abdominal distension, anorexia, and malaise might also be present.

Imaging features: Radiography, sonography, and CT are the imaging modalities which are usually used, sometimes in combination, for the evaluation of suspected or known intra-abdominal abscesses. Radiography alone is not sensitive for the evaluation of intra-abdominal abscesses. It can, however, show indirect signs of infection such as free air in the abdomen (air under diaphragm) and loss of pre-peritoneal fat planes. Sonography shows hypoechoic or heteroechoic avascular collection(s) with internal echoes which may be mobile (3). The presence of air/gas in the collection with posterior "dirty" shadowing may also be noted. CT is the imaging modality of choice for the evaluation of known or suspected post-surgical abscesses (4). CT shows hypodense collection(s) with or without air-fluid levels. Peripheral IV contrast enhancement (to varying degrees, depending on the maturity and thickness of the abscess wall) and surrounding inflammatory changes may also be seen. CT can also help in evaluating the cause of the abscess formation, such as anastomotic leaks, hollow viscus perforations, and fistulas. Imaging modalities including ultrasound and CT can also help in the guidance of drainage of intra-abdominal abscesses.

Prognosis, treatment or therapeutic options: Management of intra-abdominal abscesses depends upon the site and the size of the collections. In cases of small collections, conservative treatment with antimicrobial therapy can be undertaken. Imaging-guided drainage of the collections with placement of drainage tubes can be done in cases of larger collections. In those patients where percutaneous drainage is impossible or has proven ineffective, surgery should be undertaken (5). The cause of the abscess formation such as anastomotic leaks, intestinal perforations, and fistulas should also be treated, so as to prevent the recurrence of the abscess.