

## Imaging intra-abdominal abscesses; A pictorial essay

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Intra-abdominal abscesses are collections of pus surrounded by a wall of inflamed tissues. They would be confirmed in detail by imaging. Familiarization with imaging would facilitate the correct diagnosis and timely management. This report describes the imaging findings of five such cases. Case 1: A 61-year-old woman presented with low-grade fever and right lower chest pain. Abdominal ultrasonography showed a localized, thick-walled collection with copious, echogenic material at the right upper-posterior hypochondrium adjacent to segment VI of the liver. Contrast-enhanced CT (CECT) showed a thick-walled cystic lesion (28mm x 24mm x 25mm) at the same location. The collection laid outside the liver capsule causing indentation of the liver parenchyma. The lesion was diagnosed as a perihepatic abscess. Case 2: A 55-year-old man presented with fever, anorexia, and right-hypochondrial pain. Ultrasound abdomen showed a large, unilocular cyst with echogenic material and CECT detected a unilocular, well-defined and low-attenuated lesion in the right lobe of the liver. The arterial phase showed an enhancing cyst wall with a low-attenuating peripheral rim due to parenchymal oedema. This “double target sign” favored the diagnosis of abscess rather than cystic metastasis. Differential diagnoses were made as pyogenic or amoebic liver abscess and drained via an ultrasound-guided pig-tail catheter. Case 3: A 35-year-old woman presents with a high fever, continuous right lower abdominal pain, nausea, and vomiting for four days. The clinical diagnosis was made as acute appendicitis. Abdominal ultrasonography identified a localized fluid collection with surrounding echogenic fat in the right iliac fossa that was diagnosed as a localized abscess probably due to the ruptured appendix. CECT abdomen detected a thick-walled fluid collection with internal gas locules inferior to the caecum. The wall of the collection was enhanced with contrast. A partially collapsed appendix adjacent to the collection and surrounding inflammatory fat stranding were noted. The lesion was diagnosed as a ruptured appendix. Case 4: A 72-year-old female with uncontrolled diabetes mellitus presented with fever and right flank pain. Her abdominal examination revealed a significant right-sided renal angle tenderness. Ultrasonography showed right-sided pyelonephritis complicated with a perinephric abscess. CECT abdomen showed an enlarged right kidney with low renal cortical contrast enhancement and a perinephric abscess, abutting the psoas muscle. CT diagnosis was made as acute pyelonephritis complicated with a perinephric abscess. Ultrasound-guided drainage was performed. Case 5: A 72-year-old female with uncontrolled diabetes mellitus presented with fever and right hypochondrial pain. Ultrasonography showed a thick-walled gallbladder with internal sludge associated with adjacent fluid collection. CT-abdomen showed a thick enhancing gallbladder wall with an adjacent abscess. In conclusion, ultrasonography plays an important role in diagnosing a variety of intra-abdominal abscesses. Still, the CT-abdomen better characterizes the diagnosis. However, ultrasound-guided aspiration of intra-abdominal abscesses has become an important intervention in diagnosing and managing these patients.

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