A Male Patient with Severe Pain in the Right Hypochondrium

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Section 2 – Answer

Case

A 45-year-old nondiabetic male presented with complaints of pain in the right hypochondrium for 6 months, which was aggravated in the last 10 days. There was no history of trauma. Ultrasound and computed tomography (CT) evaluation of the abdomen was performed [Figures 1-3].

Interpretation

Ultrasound and CT images of the abdomen showed a defect in the wall of the gallbladder with pericholecystic fluid collection [Figures 2 and 3]. Hence, the diagnosis, here, is gallbladder perforation. Furthermore, we can see a hyperechoic focus in the lumen of the gallbladder showing posterior acoustic shadowing [Figure 1], which is consistent with the diagnosis of cholelithiasis.



Figure 1: Grayscale ultrasonography image of the liver and gallbladder showing multiple calculi in the lumen of the gallbladder which shows posterior acoustic shadowing

Perforation of the gallbladder is a rare entity with devastating consequences and risk to life. Various causes of perforation include idiopathic, traumatic, iatrogenic, cholelithiasis, infections, steroid use, and uncontrolled diabetes. These patients are predisposed to this condition.^[1]

Patients with gallbladder perforation present with acute pain without any known cause. The pain is usually starts in the right hypochondrium and then spreads to whole of the abdomen. The pain aggravates on movement and relieved by rest. The patient also has tenderness, rigidity, and guarding which are also the signs of peritonitis. Other symptoms with which patient can present include nausea and vomiting.

Spectrum of ultrasound finding includes gallbladder distension, pericholecystic fluid, and sonographic hole sign which has a very high specificity for diagnosis.^[2]



Figure 2: Grayscale ultrasound image showing the defect in the wall of gallbladder (sonographic hole sign)

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Figure 3: Computed tomography image showing defect in the gallbladder wall (sonographic hole sign) and pericholecystic collection

CT is considered a superior modality than ultrasound due to its ability to show focal wall defect. It also shows extraluminal gallstones as well as Mercedes-Benz sign (gas within gallstones) along with location and extent of abscess due to perforation.^[3]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and the initials will not be published and due efforts will be made to conceal the identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Alvi AR, Ajmal S, Saleem T. Acute free perforation of gall bladder encountered at initial presentation in a 51 years old man: A case report. Cases J 2009;2:166.
- Boruah DK, Sanyal S, Sharma BK, Boruah DR. Comparative evaluation of ultrasonography and cross-sectional imaging in determining gall bladder perforation in accordance to Niemeier's classification. J Clin Diagn Res 2016;10:C15-8.
- Seyal AR, Parekh K, Gonzalez-Guindalini FD, Nikolaidis P, Miller FH, Yaghmai V. Cross-sectional imaging of perforated gallbladder. Abdom Imaging 2014;39:853-74.