CASE REPORT

Subhepatic appendicitis: a diagnostic dilemma

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SUMMARY

A middle-aged woman was admitted with recurrent episodes of ill-defined right-sided abdominal pain, more prominent in the right upper quadrant. Surgical history revealed a laparoscopic cholecystectomy, 1 month prior, for gallstones that were thought to be the cause of her symptoms. However, she continued to experience similar pain with exacerbation leading to readmission. Blood tests revealed increased inflammatory markers and an ultrasound scan showed a tubular hypoechoic structure between her right kidney and liver corresponding to the area of maximal tenderness. A diagnostic laparoscopy was performed and a subhepatic inflammatory mass of appendicular origin was found. This required mobilisation of the right colon and appendectomy. The patient made an uneventful recovery after being readmitted for an ileus treated conservatively. Histology revealed acute appendicitis with mucosal ulceration.

BACKGROUND

Appendicitis is a common acute surgical condition. Normal appendix anatomy and classical presentation are well documented but aberrations exist as evidenced by the published literature.^{1–6} A high index of suspicion and awareness of these anatomical variants is necessary in order to correctly diagnose and safely manage appendicitis.

CASE PRESENTATION

A middle-aged woman was admitted with recurrent episodes of ill defined right-sided abdominal pain, more prominent in the right upper quadrant. She was not having a fever and was haemodynamically stable. Her medical history included diabetes and hypertension and her surgical history revealed a laparoscopic cholecystectomy for gallstones 1 month prior.

INVESTIGATIONS

Blood tests were requested and these showed a white cell count of $13.1 \times 10^9/L$ and C reactive protein of 36 mg/L. An ultrasound scan was performed revealing a tubular hypoechoic structure between her right kidney and liver corresponding to the site of maximal tenderness. The operation note for the laparoscopic cholecystectomy performed 1 month prior made no mention of an abnormally positioned appendix.

DIFFERENTIAL DIAGNOSIS

- ▶ Cholecystitis
- ▶ Appendicitis
- ▶ Pyelonephritis

TREATMENT

The patient underwent a diagnostic laparoscopy which revealed an inflammatory mass of appendicular origin that required mobilisation of the right colon and appendectomy. Histology revealed acute appendicitis with mucosal ulceration.

OUTCOME AND FOLLOW-UP

The patient made an uneventful recovery and was discharged on the third postoperative day. However, she was readmitted 7 days postdischarge complaining of abdominal pain, distension and vomiting. A CT scan was requested and this revealed an ileus. This settled with conservative treatment and the patient was discharged with no further complications.

DISCUSSION

Palanivelu *et al*¹ reported the incidence of subhepatic appendix at 0.08% from their study of 7210 patients. In 1955, King² reported the first case of subhepatic appendicitis due to non-descent of the caecum. Since then, only a few isolated cases have been described in the literature.^{3–4} There have been reports of intestinal mal-rotation rather than non-descent of the caecum as a cause of this anatomical variant.^{5–6} Subhepatic appendicitis does not present in the classical way and as such can be mistaken for other conditions including biliary pathology. Also, subhepatic appendicitis seems to present more often in the elderly adding further uncertainty to the diagnosis.⁷ In many circumstances it runs a chronic course with ill-defined right flank and right upper quadrant pain and diagnosis is often made at laparoscopy. Perforation and abscess formation are significant complications owing to late diagnosis.^{5–6}

Learning points

- ▶ A high index of suspicion is needed to diagnose subhepatic appendicitis since this clinical presentation may mimic other conditions including biliary pathology.
- ▶ This condition can run a chronic course and has a high incidence of perforation and abscess formation making operative intervention challenging.
- ▶ Diagnostic laparoscopy is a valuable tool in cases of atypical abdominal pain.

Competing interests None.

Patient consent Obtained.

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