CASE REPORT

Caecal faecolith, a cause of acute appendicitis

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SUMMARY

A 60-year-old woman presented to the accident and emergency department with a 3-day history of lower abdominal pain, which was sudden in onset, localised to the right iliac fossa, constant and aggravated by movements. On examination, she was febrile (100°F), tachycardic and normotensive. Examination of the abdomen revealed an ill-defined tender mass in the right iliac fossa. A clinical diagnosis of appendicular mass was made and treated conservatively. After a few days the mass became smaller, firmer, mobile and non-tender. Since the mass persisted, the patient was investigated further to rule out carcinoma of the caecum. A contrast-enhanced CT (CECT) of the abdomen showed a mass with air pockets in the caecum, suggestive of caecal faecolith. After 6 weeks, appendicectomy and removal of the faecolith were performed. The postoperative period was uneventful. Histopathology of the appendix showed inflammatory changes confirming appendicitis.

BACKGROUND

Faecolith of the caecum is very rare. This may present as a mass in the right iliac fossa which may be mistaken for carcinoma. This may very rarely cause obstruction of the colon or erode the caecal wall leading to perforation. Caecal faecolith causing acute appendicitis has not been reported in the literature. We report a case of a woman presented with acute appendicitis due to faecolith of the caecum.

CASE PRESENTATION

A 60-year-old woman presented to the casualty with a 3-day history of lower abdominal pain. The pain was sudden in onset, localised in the right iliac fossa (RIF), constant and aggravated by movements. Bowel habits were normal and there was no history of loss of appetite or weight. She attained menopause at the age of 45. She was not receiving any medication for any chronic illness.

Clinical examination revealed that she was febrile (100°F), tachycardic (pulse 88 and regular) and with normal blood pressure. Examination of the abdomen revealed an ill-defined tender non-mobile mass in the RIF. Bowel sounds were sluggish. A clinical diagnosis of appendicular mass was made and was treated conservatively. Within 2 days the tenderness in the RIF subsided and the mass regressed in size. After a few days the mass became firmer, mobile and non-tender. Since the mass persisted, the patient was investigated further to rule out carcinoma of the caecum.

Figure 1 Contrast-enhanced CT (CECT) of the abdomen showing faecolith in the caecum.

INVESTIGATIONS

Blood investigation revealed leukocytosis (WBC $15\,300/\text{mm}^3$) and neutrophilia 80%. An X-ray of the chest was normal. Plain X-ray of the abdomen showed dilated small bowel loops with multiple fluid levels. A contrast-enhanced CT (CECT) of the abdomen showed a mass with air pockets in the caecum, suggestive of caecal faecolith (figure 1).

DIFFERENTIAL DIAGNOSIS

- Appendicular mass
- Carcinoma caecum
- Ileocaecal tuberculosis
- Caecal faecolith

TREATMENT

After 6 weeks, under general anaesthesia (GA), abdomen was opened by a lower midline incision and a mobile mass was found in the caecum. Appendix was found adherent in the pelvis surrounded by loops of terminal ileum. The appendix was enlarged and the mesoappendix oedematous. Appendicectomy was performed in the usual way. Caecotomy was performed (figure 2) and a large hard faecolith $6 \times 5 \times 4$ cm found in the lower caecum was removed (figure 3). The abdomen was closed in layers after a tube caecostomy.

OUTCOME AND FOLLOW-UP

The patient made an uneventful recovery. She was followed up at 2 weeks and 3 months. She was well and clinical examination of the abdomen was unremarkable.

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Figure 2 Faecolith seen inside the caecum at caecotomy.

DISCUSSION

Faecoliths are common in rectum and sigmoid and usually due to habitual constipation or may be secondary to stricture—congenital, inflammatory, malignancy or functional. Faecolith of the caecum is extremely rare. Caecum is a cul-de-sac which empties by mass movement of the colon. The mechanism of faecolith formation is essentially related to bowel stasis, giving rise to accumulation of faecal matter which is subjected to desiccation. If the accumulation is rapid and the fluid absorption is slow, then the mass remains large being referred to faecal impaction or faecoloma, which feels soft and putty-like. If the accumulation is slow and desiccation is fast then the mass becomes hard and dry and is called a faecolith. Both varieties are common in the rectum and rectosigmoid junction and Rosenrauch¹ considers faecolith elsewhere to be of the greatest rarity.

Walker¹ reports two cases of caecal faecolith presenting as mass in the right iliac fossa. One patient presented with signs of

intestinal obstruction and underwent resection of caecum. The second patient was admitted with gastroenteritis and because of the presence of mass in the RIF, appendicectomy, caecostomy and removal of faecolith were carried out.¹ Rarely, faecolith of the caecum can lead to ileocolic intussusception.² An unusual case of caecal perforation in a child due to caecal faecolith diagnosed as acute appendicitis was reported by Simpkin and Lakhoo.³

Acute appendicitis is associated with obstruction of the appendiceal lumen either by a faecolith or stricture in the majority of cases. Obstruction of the appendiceal orifice by tumour, particularly carcinoma of the caecum, is an occasional cause of appendicitis in middle-aged and elderly patients.⁴ Bizer has observed that in 1.8% of patients acute appendicitis is the initial presentation of an underlying caecal carcinoma.⁵ The present case being an elderly woman with a hard mass in the RIF was diagnosed as carcinoma of the caecum since the mass persisted even after the inflammatory appendicular mass resolved with conservative treatment. Caecal faecolith had obstructed the appendiceal orifice and resulted in acute appendicitis and appendicular mass. No similar case was reported in the literature.

Learning points

- ▶ Faecolith of the caecum is very rare and it has to be considered in the differential diagnosis of the right iliac fossa mass. It can cause appendicitis by obstructing the appendicular opening.
- ▶ Faecolith of the caecum has to be surgically removed as it cannot be removed by conservative measures. It can also erode the caecum leading to perforation.
- ▶ Contrast-enhanced CT will clinch the diagnosis by showing the characteristic features of faecolith.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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Figure 3 Faecolith and appendix specimens.

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