Caeco-colic Intussusception Simulating an Appendicular Mass

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Background

Acute appendicitis is a common diagnosis encountered in emergency surgical admissions with a need for an immediate appendicectomy. In about 2-6% of cases, an appendicular mass has already developed at presentation. (1) There is the trend to treat appendicular mass by conservative management, which may be adequate in children but in the adults the clinical diagnosis should be radiologically confirmed as other sinister pathological processes such as intussusception or tumour may simulate an appendicular mass. Here we present a case of caeco-colic intussusception presenting acutely similar to an appendicular mass.

Case presentation

A 61 years old retired nurse presented to the casualty with ten day history of colicky central abdominal and right iliac fossa pain. It was more at the right iliac fossa and has gradually worsened. There was an associated anorexia, gradual abdominal distension, nausea but no vomiting. She had a normal bowel movement the day before presentation.

She was asthmatic, hypothyroid, and has had a total abdominal hysterectomy for a benign condition several years back, was on salbutamol and Beclazone inhaler and thyroxin tablets.

On examination, she was afebrile but tachycardic with a pulse of 98/minute, blood pressure of 155/86mmHg and respiratory rate of 16. The abdomen was slightly distended, diffusely tender but more at the right iliac fossa (RIF), with guarding and a palpable tender mass. There were hypoactive bowel sounds and rectal examination revealed a loaded rectum with normal stool.

The haemoglobin (Hb) was 14.5g/dl, white cell count (WBC) 11.8 X10⁹/L, neutrophils 8.7 X10⁹/L, CRP 76, amylase 28 iu/L, and normal liver function tests. The abdominal and chest x-rays were normal.

A provisional diagnosis of appendicular mass was made. She was managed conservatively with intravenous fluid, analgesics and broad-spectrum antibiotics. Abdominal computerized tomography (CT) scan showed a marked circumferential thickening of the Caecum wall, extending into the ascending colon, with an associated well circumscribed 4 x 5.4cm fat containing intramural lipoma, with intussusception of the caecum. (Fig.1 a&b). The liver, spleen, gallbladder, and pancreas were normal.

She underwent a laparotomy, which revealed some turgid peritoneal fluid, minimal ileal dilatation and an intussusception of the caecum into the ascending colon. A limited right hemicolectomy was done with primary ileo-colic anastomosis. The post operative recovery was uneventful and she was discharged home after 5 days.

The histology confirmed an intussuscepting caecal polypoidal tumour of adipose tissue, covered with partly ulcerated mucosa and atrophic appendix. (Fig 2)

Discussion

Appendicular mass is caused by the swelling and inflammation of the appendix, caecum, omentum and the distal part of the terminal ileum. It accounts for about 2-6% of patients presenting with appendicitis. (1) It forms a spectrum of diseases ranging from an inflamed appendix, walled off by the omentum (an appendiceal phlegmon), to a large collection of pus surrounded by adherent and inflamed omentum (an appendiceal abscess). (2) There are three approaches to the treatment; one is the conservative management, with intravenous fluid, analgesics and antibiotics. Secondly is the immediate operative approach where appendicectomy is performed before the mass resolves and thirdly is the more classic approach of initial conservative management of the mass followed by interval appendicectomy after the resolution in about 6-8 weeks.(1,2)

Malignant or benign lesions in the terminal ileum and caecum, such as adenoma, lymphoid hyperplasia or lipoma causing intussusception, can mimic appendicular mass, such as illustrated by our case, hence the need to adequately confirm the diagnosis by radiological investigations such as abdominal CT scan at the same admission, as this may necessitate an immediate operative intervention. Lipoma is the commonest mesenchymal benign tumour of the colon,
although rare, accounts for 21% of colonic intussusception. They are usually small and frequently seen in the right colon, especially at the caecum in elderly women (3). The majority of intussusception in children, 85-90%, is of idiopathic cause but in adults, an identifiable lead lesion is seen in 72-92% of cases, about 50% of which may be malignant. (4). Intussusception is not a common encounter in the adults, representing 5% of all intussusceptions and 1% of all bowel obstructions (3). Patients tend to present with vague abdominal pains and features of partial bowel obstruction which may be acute, intermittent or chronic, with about 11% presenting with an abdominal mass (3). CT scan is the most reliable pre-operative investigation as it demonstrates the lesion with accuracy in 75-78% of cases. It is described as a ‘target mass’ on CT with the intussusceptum forming the centre and the oedematous intussuscipien forming the external ring (3). It is made up of invagination of bowel segment, the intussusceptum (the inner part) into the adjacent bowel the intussuscipiens (the outer part). Delays in the treatment can lead into full blown bowel obstruction and strangulation, which usually affect the intussusceptum but may occasionally affect the intussuscipiens as well. The signs of peritoneal irritations are usually absent initially as the gangrenous intussusceptum is covered by the initially normal intussuscipiens. (4,6)

Treatment of colonic intussusception in the adults is en bloc resection, without manipulation, as advocated by many series as this prevents perforation of the gut and minimises spillage of gut content or dissemination of malignant cells when the intussusceptum is malignant. (6)

Conclusion

In making a diagnosis of appendicular mass, adequate investigations such as the abdominal CT scan should be done to rule out other possible causes of RIF mass especially if conservative management is instituted. Malignant or benign lesions in the terminal ileum and the caecum such as adenoma, lymphoid hyperplasia or lipoma causing intussusception, can mimic appendicular mass, such as illustrated by our case, hence the need to adequately confirm the diagnosis by radiological investigations such as abdominal CT scan at the same admission, as this may necessitate an immediate operative intervention.

References

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Illustrations

Illustration 1

Fig 1a Abdominal CT scan with oral contrast showing well circumscribed fat containing intramural lipoma with intussusception of the caecum.
Illustration 2

Fig 1b. Abdominal CT scan with oral contrast showing well circumscribed 4 x 5.4cm fat containing intramural lipoma with intussusception of the caecum.
Illustration 3

Fig 2. Specimen of intussuscepting caecal polypoidal tumour of adipose tissue, (arrowed) covered with partly ulcerated mucosa and the atrophic appendix.
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