CASE REPORT

Undiagnosed intussusception in an adult 'small and large bowel'

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christa.morrison@doctors.org.uk**SUMMARY**

Two cases of adult intussusception (large bowel and small bowel) are presented highlighting the challenges posed by their often innocuous presentation in addition to significant morbidity resulting from delayed diagnosis.

BACKGROUND

As adult intussusception is a relatively uncommon presentation, thresholds of suspicion ought to be lowered in adults presenting with non-specific abdominal pain of uncertain aetiology.

CASE PRESENTATION**Case 1**

A 41-year-old woman presented to accident and emergency (A&E) department with a 2-day history of 'cramping' abdominal pain, vomiting and diarrhoea. She was previously well, with no associated comorbidities. Initial observations were normal. Examination revealed right upper quadrant abdominal tenderness; an additional review of the system was unremarkable.

Case 2

A 65-year-old man presented to A&E department with spontaneous diffuse non-specific abdominal pain. Medical history included excised Spitzoid naevus, breast mastectomy (ductal carcinoma) and right pretibial malignant melanoma. Initial observations and subsequent examination were unremarkable.

INVESTIGATIONS**Case 1**

Laboratory investigations showed leucocytosis $14.28 \times 10^9/L$ (neutrophils $11.85 \times 10^9/L$), C reactive protein (CRP) <1 , amylase 71, normal hepatorenal profile and ketonuria/proteinuria. No imaging was performed. Twelve hours later she reported persistent vomiting associated with severe right upper quadrant abdominal pain. Examination revealed diffuse peritonism. Imaging was performed and considered unremarkable (figure 1). Following deterioration, an urgent CT of the abdomen (figure 2) demonstrated a large ileocolic intussusception.

Case 2

Laboratory investigations showed leucocytosis $16 \times 10^9/L$ (neutrophils $13.59 \times 10^9/L$), CRP 6, and venous lactate 4.11. Hepatorenal function was normal. Plain abdominal radiography (figure 3) demonstrated multiple prominent loops of small bowel in the left flank (3.5 cm maximum transverse

diameter). CT of the abdomen (figure 4) demonstrated *ileoileal intussusception*.

DIFFERENTIAL DIAGNOSIS**Case 1**

She was diagnosed with gastroenteritis and discharged home. Following representation the differential diagnosis changed to peptic ulcer disease (or) biliary colic.

Case 2

Not documented.

TREATMENT**Case 1**

Following representation the patient was admitted for conservative management of peptic ulcer disease (or) biliary colic. Within 10 h, she deteriorated. Re-examination revealed a palpable suprapubic mass. A repeat urgent CT abdomen demonstrated a large ileocolic intussusception, requiring an urgent laparotomy.

Case 2

The patient underwent a laparotomy with small bowel resection for gangrenous bowel.

OUTCOME AND FOLLOW-UP**Case 1**

Faecal peritonitis and a 37-day stay in intensive care unit (ICU) complicated recovery. She was subsequently discharged home.

Case 2

He underwent a 2-day stay in ICU. He made an unremarkable recovery and was discharged home.

DISCUSSION

Adult intussusception is relatively rare accounting for approximately 1% of all causes of adult bowel obstruction (mostly small bowel, female predominance and typically 5th decade of life).¹⁻⁴ Aetiology remains unknown in 10–50% of reported series.⁵

Unlike paediatric presentations (a classic presentation triad of abdominal pain, blood per rectum and/or vomiting), adults typically have non-specific presentations⁶ (up to 90% of cases presenting with preceding nausea, vomiting and/or diarrhoea).^{1 7 8} In a 12-year observational cohort study, 20% were asymptomatic on initial presentation,⁵ accounting for the reported frequency in diagnostic delays (between 10% and 60%).^{7 8} More recently, a retrospective analysis found enteric and colonic intussusceptions likely to have initial presentations consistent with obstruction and appendicitis, respectively.³ However, the

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Figure 1 X-ray demonstrating large bowel intussusception.

Figure 3 X-ray demonstrating small bowel intussusception.

Figure 2 CT of the abdomen demonstrating large bowel intussusception.

Figure 4 CT of the abdomen demonstrating small bowel intussusception.

physical examination continues to have a low reported diagnostic yield.⁷

CT has a high diagnostic accuracy (90%) than the less-sensitive/less-specific abdominal ultrasound (60%) in diagnosing

adult intussusception¹; plain radiography carries little clinical utility⁹ despite its continued application as an initial investigation in the unscheduled care setting, as is in our case.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

Learning points

- As our cases demonstrate, the diagnosis of adult intussusception provides a challenge owing to a low diagnostic clinical yield. This is confounded by the low reported incidence/prevalence (thereby adversely altering diagnostic thresholds).
- It is essential that emergency physicians consider intussusception early in their differential diagnoses in the management of non-specific abdominal pain and get early emergent CT and surgical consultation in all cases where suspicion exists.

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