INTRODUCTION

Right iliac fossa pain, nausea and vomiting in adults are common symptoms that require careful surgical assessment with acute appendicitis being a common cause. Rarely, other conditions can mimic this presentation e.g. caecal diverticulitis. Caecal diverticulum perforation is often misdiagnosed due to lack of characteristic features and the commonest method of detection is an intraoperative one.¹

The authors hereby, report this unusual condition in an adult male.

CASE REPORT

A previously healthy 44-year male presented in the emergency with complaint of pain in abdomen which had gradually increased over the past 3 days. Initially, it was diffuse in nature but later on it became localized to the right iliac fossa. It was associated with fever of 100°F for one day. There was loss of appetite but no other gastrointestinal or genitourinary symptoms. Patient had no history of any co-morbidities. There was no previous surgical intervention.

On physical examination, he had tenderness and rebound tenderness in the right iliac fossa. Complete blood examination showed leukocytosis with neutrophilia. Urine examination was un-remarkable. Chest X-ray and abdominal X-ray were normal. Ultrasound examination was normal. On the basis of clinical and biochemical findings he had an Alvarado score of 9.

A provisional diagnosis of perforated acute appendicitis was made and the patient was prepared for open appendectomy.

After induction of anaesthesia patient was prepped and draped. Abdomen was opened via a Rutherford-Morrison incision. Intra-operatively he was found to have two tubular structures arising from the caecum (Figure 1). One was a normal appendix and the other was a perforated caecal diverticulum as a result of faecolith impaction (Figure 2). The base of the diverticulum was healthy. Diverticulectomy was done and the diverticulum base was buried by purse string suture. No other caecal diverticulae were present. Since a Rutherford-Morrison incision had been made, appendectomy was done in order to avoid future diagnostic confusion. Omentum was placed in the right iliac fossa over the site of resection. Abdominal wound was closed in reverse order.

Both specimens were sent for histopathology. Histopathology report showed that the section from the diverticulum had intestinal mucosa lined by columnar cells. Underlying submucosa had moderate acute on

Figure 1: Operative findings (A) Diverticulum (B) Appendix.

ABSTRACT

Caecal diverticulum perforation is a rare condition. It mimics acute appendicitis and is seldom suspected pre-operatively. Commonly it is discovered during exploration. Ultrasonography and computed tomography are helpful in the diagnosis of the condition. There is controversy regarding the surgical treatment. We are presenting the case of a 44-year male who underwent exploration for suspected acute appendicitis but was found to have a perforated solitary caecal diverticulum. Patient underwent diverticulectomy and made an uneventful recovery.

chronic inflammatory cell infiltrate and edema. Appendicular section was normal.

The patient made an unremarkable postoperative recovery.

**DISCUSSION**

Caecal diverticulitis is a rare condition.² The average age of most patients is in forties and the symptoms of most patients are similar to appendicitis.³ This was tallying with present case.

Anatomically caecal diverticulae are divided into two groups: true (or congenital) and false (or acquired). The true diverticula are believed to arise as a result of developmental abnormalities. A true diverticulum contain all layers of colon wall. False diverticulae arise as a result of persistent increased intra-colonic pressure and contain no muscular layer.

A relatively longer duration of pain, lack of toxicity, absence of nausea and vomiting and failure of migration of pain have been suggested to be clinical features that differentiate it from acute appendicitis.⁴ However, despite these subtle signs, the condition is usually clinically indistinguishable from acute appendicitis and the correct diagnosis is often made during exploration for suspected appendicitis.¹⁻³

Radiological investigations that might aid in diagnosis are ultrasound and computed tomography (CT) scan. Ultrasound findings that favour the diagnosis include hyperechoic or hypoechoic out-pouching of the right colonic wall and localized circumferential colonic wall thickening at the level of diverticulum.⁵ Characteristic CT findings include direct visualization of the diverticulum at the level of maximum circumferential wall thickening.⁶

The surgical management of non-perforated caecal diverticulitis is controversial. If the condition is diagnosed confidently pre-operatively, conservative management with bowel rest, monitoring, intravenous fluids and antibiotics may be done in an attempt to avoid laparotomy.

If it is an intra-operative diagnosis, the diverticulum may be left alone if broad-based and uninflamed after completing the appendectomy. In case of inflamed caecal diverticulum, surgical options include isolated diverticulectomy, ileo-caecal resection and right hemicolectomy.⁷ The choice of the surgical treatment needs to be tailored according to the patient. Simple diverticulectomy with appendectomy should be considered where malignancy is expected to be unlikely as in this patient. Whereas preference should be given to more extensive options where likelihood of malignancy is high.⁸

In cases of perforation, attention also needs to be paid to the extent of contamination of the peritoneal cavity, the condition of the gut and the vital status of the patient when deciding regarding the surgical treatment.

**REFERENCES**