CASE REPORT

Right-sided colonic tuberculosis: a rare cause of ilio-psoas abscess

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SUMMARY

Ilio-psoas abscess due to right colon origin is rare and normally occurs secondary to Crohn's disease, diverticulitis or cancer. We report a case of a caecal tuberculosis (TB) presented initially with an appendicular mass and systemic symptoms of fever and fatigue and 3 weeks after, with right-sided anterior thigh pain and found to have an ilio-psoas abscess. Colonoscopy and histology confirmed the diagnosis of caecal-TB. She had a CT drainage of the abscess and was discharged with anti-TB treatment and her drain in situ. Repeat pelvic MRI 10 days after treatment showed the abscess resolving and her systemic symptoms improving.

BACKGROUND

With the increase of HIV epidemic and influx of immigrants in the UK, colonic tuberculosis is a more common encounter in daily practice. Within a month we encountered two cases of colonic tuberculosis in our institution. We therefore raise awareness of the disease for gastroenterologist and colorectal surgeons especially when dealing with patients with long-term gastrointestinal complaints and systemic symptoms.

CASE PRESENTATION

A 23-year-old woman from Erythrea, presented with 1 week history of worsening right lower abdominal pain and inability to walk due to severe pain radiating down to her anterior part of right thigh made worse on extending the hip. She was previously diagnosed with appendicular abscess on CT (figure 1) 1 month

Figure 2 MRI of pelvis showing a right-sided ilio-psoas abscess.

before, after she presented with 4 weeks history of right iliac fossa pain, fever and weight loss.

On examination her temperature was 38.1°C, heart rate was 112 bpm and blood pressure of 120/78.

Abdominal examination revealed tenderness over the right iliac fossa and she was resisting hyper-extension of her right hip due to pain.

Her medications were oral co-amoxiclav, metronidazole and analgesia.

She was a student and was born in the UK. On questioning about TB contacts in the past she recollects that her brother had tuberculosis 10 years ago and he was treated for that.

INVESTIGATIONS

Her haematological investigations revealed a persistent neutrophilia and elevated C reactive protein. During her latest presentation her haemoglobin (Hb) was 8.9 g/dl, mean corpuscular volume 72.9 fl, white cell count $13.7 \times 10^9/l$ (87.5% neutrophils) and platelets $606 \times 10^9/l$. She had a normal renal function and electrolytes and normal liver function tests. Her CRP was 120 mg/l.

MRI of the pelvis (figure 2) confirmed a large right-sided iliacus abscess partially involving the right psoas muscle. Colonoscopy showed an ulcerated stricture within the caecum impeding the passage of endoscope. Mucosal congestion, erythema and granularity with multiple ulcers rose suspicions of tuberculosis (figures 3 and 4). The diagnosis of TB was confirmed on histology taken from caecal biopsies showing caseating granuloma and visualisation of acid-fast bacillus.

Figure 1 CT abdomen showing caecal/appendicular mass.

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Figure 3 Endoscopic image of the proximal ascending colon showing an extensive inflammatory response.

TREATMENT

She had a CT-guided drainage of her abscess and was discharged with the drain in situ and with anti-TB medications.

OUTCOME AND FOLLOW-UP

Repeat MRI pelvis 10 days later showed resolution of the abscess and improvement of her symptoms. Also 4 months

Figure 4 Endoscopic image showing a caecal extensive inflammatory response.

following discharge reported resolution of her symptoms and was gaining weight.

DISCUSSION

Appreciation of ilio-psoas muscle anatomy and its relation with the surrounding organs is important in order to understand the possible sources of infection in the muscle and the presenting signs. Psoas originates from the body and transverse processes of T12-L5 vertebrae and iliacus muscle originating from the iliac fossa of the iliac bone. The tendons of the two are fused together as they pass below the inguinal ligament and form the ilio-psoas tendon, which is inserted into the lesser trochanter of femur. Their main function is flexion of the hip joint. And lateral flexion of the lumbar spine by the psoas muscle. Extension of the hip joint can therefore cause stretching of ilio-psoas and elicit pain and this is a sign of psoas pathology. Some of the surrounding organs that can spread disease to the ilio-psoas are sigmoid colon, caecum and appendix, kidneys and ureter as the psoas is closely related to the posteromedial surface of the kidney and lumbar spine. Also aortic diseases like a mycotic aneurysm and pathologies from pelvic organs can result into psoas abscess.

Primary infections are infections that there is no identifiable close-by source and are a result of haematogenous spread to the muscle as due to its type 2 muscle fibres it has rich blood supply and high myoglobin content. This is common to immunocompromised individuals, intravenous drug users, diabetics and renal failure patients.¹

An analysis of 12 patients by Van Den Berge *et al*, presenting with ilio-psoas abscesses, showed that five of them were primary and the commonest organism was *Staphylococcus aureus* all of which had known predisposing factors. From the seven people that had secondary abscess only two were identified to have the *Mycobacterium tuberculosis* and both in of them it was as a result of a direct spread from spinal TB also known as Pott's disease.²

Successful treatment is by drainage of the abscess and systemic treatment with anti-TB medications. Our patient's symptoms seemed to respond well to conservative treatment with anti-TB medications and this is the case for a majority of colon TB unless a surgical emergency like perforation or obstruction arises.³ It is important to note that she was treated initially with co-amoxiclav and metronidazole but she failed to respond with worsening of her symptoms and extension of the abscess to the ilio-psoas muscle. Therefore, failure of resolution of symptoms in cases of appendicular abscess should raise concerns of a more sinister cause like carcinoma in elderly patients or tuberculosis in patients that are immunocompromised or originating from countries with high prevalence. Our patient was born in the UK but she had a prior exposure of TB through her brother 10 years ago. Her HIV test was negative.

Searching the literature we could not identify similar case. This is the only report of a secondary ilio-psoas abscess due to caecal tuberculosis.

Learning points

- ▶ Gastrointestinal tuberculosis is becoming a more common encounter in clinical practice in the UK.
- ▶ Secondary ilio-psoas tuberculosis from a caecal-TB, however, is a rare entity.
- ▶ Failure of response of appendicular abscess to conventional antibiotics in a young patient should raise suspicions of colonic-TB.

Contributors GD was involved in research, writing, review and editing of the manuscript. MN and RN operated on the patient and reviewed the manuscript and also supervised the whole process. RN was the consultant in charge of the case. All authors approved the final draft of the manuscript.

Competing interests None.

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