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CASE REPORT

Mesenteric panniculitis

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SUMMARY

A 53-year-old black woman presented with a 3-day history of abdominal pain. Ultrasound of the abdomen showed a gall bladder packed with small stones. She gave a history of abdominal surgery for a gynaecological condition. She had a cholecystectomy done, but her symptoms continued after cholecystectomy. She then had anendoscopic retrograde cholangiopancreatogram (ERCP) and sphincterotomy done, again her symptoms remained the same. A CT scan of the abdomen was done, and mesenteric panniculitis was suspected. A laparoscopic biopsy of the mesentery was performed, and it confirmed mesenteric panniculitis. She was started on a 2-week course of steroids to which she responded very well. Three months after the initial presentation, she was still asymptomatic.

BACKGROUND

Mesenteric panniculitis is a rare and benign acute and chronic inflammatory and fibrotic process that affects predominantly the small and less frequently (20%) the large intestine mesenteric fat.[1 2] It may more rarely involve retroperitoneal, pelvic and peripancreatic fat. It is more common in men, with a male-to-female ratio of 2–3:1, and it is more common in Caucasian men.[2] As of 2016, less than 300 cases have been reported around the world and none from South Africa.[3] It may be associated with a variety of conditions such as prior abdominal surgery, malignancy, autoimmune disease, infections, gall stones among others.[4]

Presenting symptoms are non-specific and include abdominal pain, bloating, weight loss and intestinal obstruction. CT scan may reveal soft tissue masses, prominent lymph nodes, inflammation and/or fibrosis of the mesentery. Greasy ring signal and pseudocapsule findings are considered more specific CT findings, but biopsy is still required to confirm the diagnosis.[1] The aim of this case report is to raise awareness among clinicians of this rare condition.

CASE PRESENTATION

A 53-year-old black woman was admitted to our hospital at night with a 3-day history of worsening deep continuous generalised abdominal pain and nausea not responding to repeated doses of paracetamol. She gave a history of oophorectomy 8 years ago for an unknown reason with no other significant medical or surgical history. Clinical examination revealed a tachycardia of 93 beats per minute with normal blood pressure and temperature. Abdominal examination was normal with no evidence of peritonitis, organomegaly or any localising tenderness.

INVESTIGATIONS

Ultrasound of the abdomen revealed a large number of small stones in the gall bladder with a normal gall bladder wall thickness and no bile duct stones. There was no bile duct dilatation. Liver function test, full blood count, erythrocyte sedimentation rate, amylase and lipase, and blood sugar were normal. A diagnosis of biliary colic was made, and laparoscopic cholecystectomy was performed at which time the surgeon reported the presence of small amount of clear fluid in the abdomen. The next day the patient reported the pain to be the same with no signs of improvement. The treating surgeon suspected retained stones and therefore ordered an ERCP, sphincterotomy and balloon sweep which were performed on day 2 of hospitalisation. This revealed no retained stones. Amylase and lipase were repeated, and they again came back normal.

A CT scan of the abdomen was done 2 days after ERCP, and it revealed features suggestive of small bowel mesenteric panniculitis as shown by blue arrows in (figure 1A, B)

A repeat laparoscopy was done after CT findings to biopsy and confirm the mesenteric panniculitis, and this showed acute inflammation of the mesenteric fat in keeping with mesenteric panniculitis indicated by blue lines as shown in figure 2.

DIFFERENTIAL DIAGNOSIS

- Biliary colic.
- Cholecystitis.
- Pancreatitis.

TREATMENT

The patient was started on prednisone 40 mg daily for 2 weeks, and on the second day, she reported a marked improvement in pain intensity. Steroids were stopped after 2 weeks without tailoring them off as this was too short a course to require tailoring doses. She was discharged on the fifth day on oral prednisone to complete the course.

OUTCOME AND FOLLOW-UP

She was reviewed a month later and reported complete resolution of her symptoms on no medication. Three months later, she was still asymptomatic on no medication.

DISCUSSION

Mesenteric panniculitis is a rare inflammatory condition characterised by acute and chronic non-specific inflammation of the adipose tissue of the intestinal mesentery.[2]

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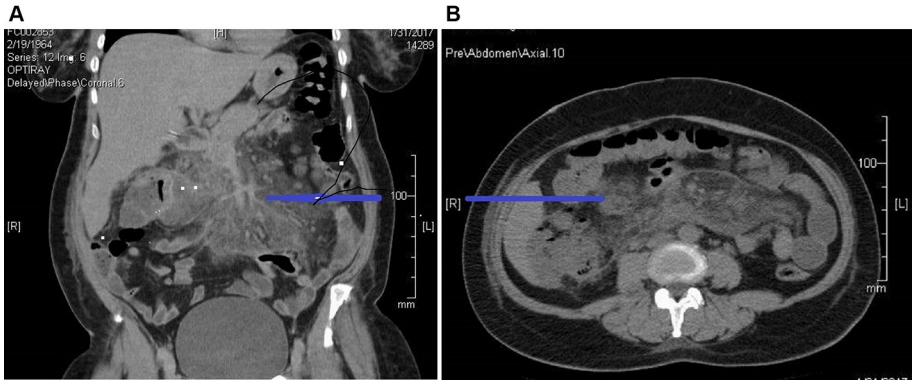

Figure 1 (A,B) CT scan of the abdomen showing mesenteric necrosis (blue lines).

The disease affects Caucasian men more commonly, with a male-to-female ratio of 2–3:1.[2]

The pathogenic mechanism is unknown, and non-specific immune response to a variety of stimuli has been suggested. Emory *et al* have reported a series in which 84% of patients had a history of abdominal surgery or trauma.[5] Our patient had oophorectomy done 8 years ago. Other reported associations include mesenteric thrombosis, mesenteric arteriopathy, drugs, thermal or chemical injuries, autoimmune diseases, pancreatitis, gall stones and peptic ulcers.[4 6] Our patient was found to have a large number of small gall stones on ultrasound with no evidence of cholecystitis. She was thought to have biliary colic from these stones. Magnetic resonance cholagiograpy and pancreatography (MRCP) could not be done before ERCP because of unavailability and cost. The patient would have had to be transported to another hospital after a long waiting period. Clinical presentation is non-specific, but abdominal pain is reported to be the the most common symptom. Symptom duration may be 24 hours to 2 years,[1] this was how our patient presented. It presents mainly in the sixth to seventh decade.[1] Clinical examination and laboratory test are usually not helpful in the diagnosis but help to exclude more common conditions.

CT scan is the image of choice but does not confirm the diagnosis. Diagnosis needs to be confirmed by histology which is usually by laparoscopic biopsy of the mesentery as done in our patient. Histology is necessary to confirm the diagnosis, and this can be done through laparoscopy or laparotomy. Treatment options are based on case reports as the condition is rare; however, the following have been tried with variable outcomes depending on the stage of the disease, that is, symptomatic inflammatory or fibrotic state, steroids, azathioprine, cyclophosphamide, colchicine, tamoxifen and radiotherapy. Spontaneous resolution of the illness has been reported. Patients with greater inflammatory component appear to be the most receptive to glucocorticoids alone or in combination.[1] Surgery is indicated in those patients with compressive or obstructive symptoms. The disease can resolve and recur spontaneously over the years. Our patient responded well to corticosteroids, and 3 months later, she was symptom free. Her risk factors were gall stones and previous surgery.

Our patient is unique in that she is a woman, and this is a disease in men. She is of black African origin, and the disease is seen in Caucasian men. The best treatment option is unknown. Our patient responded well to steroids which adds to a pool of steroid responders.

To our knowledge, there has not been any patient with mesenteric panniculitis reported from South Africa.

The patient was informed about the condition being a remitting and recurring condition and has no known cure.

Learning points

- This is one of the rarest gastroenterology conditions.
- Clinical awareness of this condition will help identify more cases and improve treatment protocols.
- The condition responds well to steroids.
- Though it is rare, it does occur in women and black Africans.

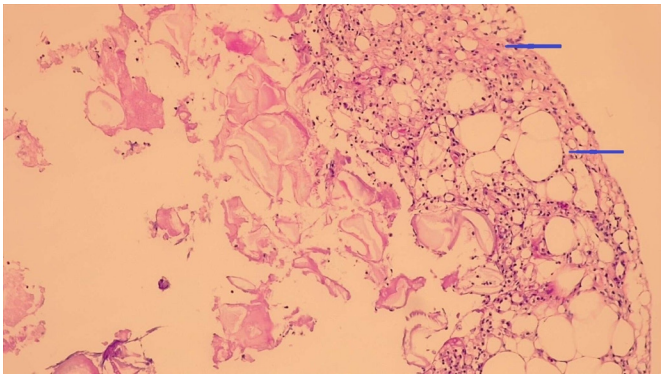

Figure 2 Histology slide showing inflammation of the mesenteric fat.

Contributors MK was responsible for the conception and design, planning, reporting and acquisition of patient data. AE and KM were responsible for the planning and collecting of data.

Competing interests None declared.

Patient consent Obtained and correct

Provenance and peer review Not commissioned; externally peer reviewed.

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