A rare complication of retroperitoneoscopic radical nephrectomy: chylous ascites

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Introduction

An 80-year-old man presented to the acute general surgical team with a 2-week history of worsening generalised abdominal pain, abdominal distension and reduced appetite. Two months prior, he had undergone a retroperitoneoscopic left radical nephrectomy for a 6 cm lower pole renal cell carcinoma. A computed tomography scan of the abdomen and pelvis demonstrated large volume chylous ascites. A percutaneous drain was inserted and left in situ for 23 days, during which the patient was placed on a low-fat diet. His chylous ascites resolved with these conservative treatments.

Discussion

Chylous ascites is a leak of lymphatic fluid into the abdominal cavity. As reported by Kim and Kwon (2016), incidence has increased as a complication of urological surgery thought to be caused by the increased use of minimal access surgical approaches.

On average, presentation of chylous ascites occurs 5–12 days postoperatively as a passage of milky white fluid through an abdominal drain. This fluid has a triglyceride level 2–8 times greater than plasma, or greater than 150–200 mg/dl (Kim and Kwon, 2016).

The patient may attend with increased abdominal distension, bloating, dyspnoea, nausea and vomiting, or wound leakage. Blood results may show low albumin, lymphocytopenia or anaemia levels, but these are not required for a diagnosis to be made (Shah et al, 2008). An ultrasound or computed tomography scan of the abdomen and pelvis is typically performed, followed by a paracentesis. Paracentesis has been suggested as a management method as it can provide immediate relief to the patient, but repeated paracentesis or drain insertion may prolong chylous ascites (Kim and Kwon, 2016).

Diet control is the mainstay treatment for chylous ascites. A low-fat, high-protein and medium chain triglyceride diet is recommended. If diet management fails, total parenteral

Case report

An 80-year-old man presented to the general surgical team with a 2-week history of generalised abdominal pain exacerbated by eating, reduced appetite and abdominal distension. Two months earlier, he underwent a retroperitoneoscopic left radical nephrectomy for a 6 cm renal mass. There were no immediate complications and he was discharged home the following day. His past medical history included a right dynamic hip screw for a neck of femur fracture in 2018, Gleason 4+4 T2 prostate cancer treated with radical radiotherapy and hormone therapy in 2014, atrial fibrillation and cardiac stents.

In view of his recent abdominal surgery and presenting symptoms, an urgent computed tomography scan was requested. This showed a large volume of peritoneal fluid with a fat/fluid level, suggestive of a chyle leak (Figures 1 and 2). An ultrasound-guided percutaneous drain was inserted. This drained a creamy white odourless fluid (Figure 3) with a triglyceride content of 69.6 mmol/litre, confirming chylous ascites.

An 8Ch percutaneous drain was inserted which drained 5 litres of fluid during the first 24 hours. The patient was commenced on a low-fat diet which permitted skimmed milk, soft cheese and lean, skinless meat. He was additionally prescribed high energy low-fat drinks, including Fortijuice.

Before his drain was removed the patient was restarted on a normal diet. His drain output did not increase and the drain was removed after 23 days of being in situ. There was no subsequent symptomatic recurrence of his ascites, and a surveillance computed tomography scan at 6 months did not demonstrate evidence of the recurrence of cancer or chylous ascites.

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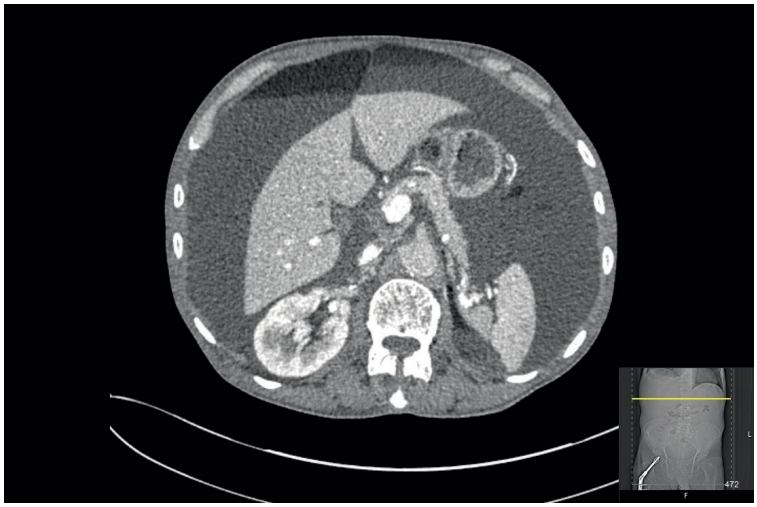

Figure 1. An axial computed tomography scan showing chylous ascites.

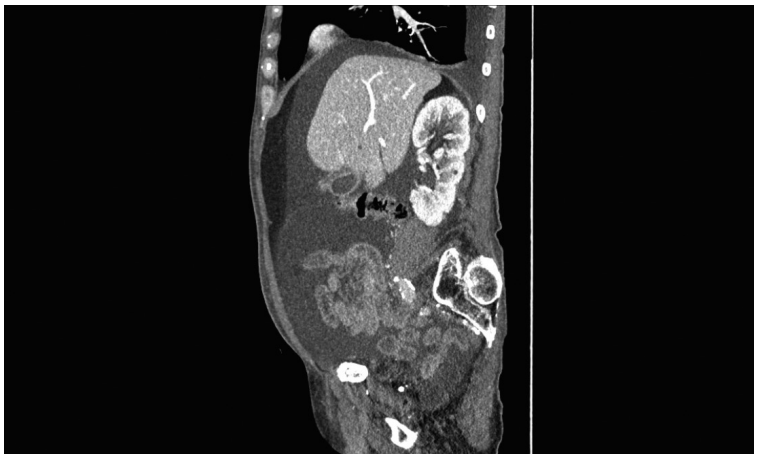

Figure 2. A sagittal computed tomography scan showing chylous ascites.

Figure 3. Chylous fluid.

Learning points

- The frequency of chylous ascites as a complication of urological surgery is increasing with the use of laparoscopy approaches for nephrectomy. Urologists should be aware of it as a complication.
- Chylous ascites is hard to diagnose once a drain has been removed as it presents similarly to any other abdominal fluid collection. Paracentesis or drain insertion is needed to clarify the diagnosis by measurement of the level of triglycerides in the fluid.
- Conservative measures with dietary control should be considered as the first-line management as chylous ascites can resolve with this alone. A multidisciplinary team approach with a dietician's involvement should be routinely followed.
- Identifying the leak point is important for a successful surgical repair, which should be considered if conservative measures have failed.

nutrition use is suggested either on its own or in association with a medium-chain triglyceride diet. Pharmacological treatments, such as somatostatin, have been trialled. Early use of these treatments is recommended, alongside a change in diet (Shah et al, 2008; Kim and Kwon, 2016).

Surgical repair is typically considered after a trial of conservative management of at least 8–12 weeks (Kim et al, 2010). Identifying the leakage point can be achieved by the patient digesting butter before theatre and once identified, the leak can be clipped or sutured closed. If not identified, Jairath et al (2015) recommend that suturing periaortic tissue and clipping around the peri-hilum may aid closure.

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References

Jairath A, Singh A, Ganpule A et al. Management protocol for chylous ascites after laparoscopic nephrectomy. Urology. 2015;86(3):521–528. https://doi.org/10.1016/j.urology.2015.06.001

Kim BS, Kwon TG. Chylous ascites in laparoscopic renal surgery: where do we stand? World J Clin Urol. 2016;5(1):37-44. https://doi.org/10.5410/wjcu.v5.i1.37

Kim BS, Yoo ES, Kim TH, Kwon TG. Chylous ascites as a complication of laparoscopic nephrectomy. J Urol. 2010;184(2):570–574. https://doi.org/10.1016/j.juro.2010.03.128

Shah SS, Ahmed K, Smith R et al. Chylous ascites following radical nephrectomy: a case report. J Med Case Rep. 2008;2(1):3. https://doi.org/10.1186/1752-1947-2-3