CASE REPORT

Chylous Ascites in Advanced Gallbladder Cancer

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Abstract Chylous ascites is a very rare occurrence in a patient with gallbladder cancer (GBC), and only six cases have been reported. We report here one such case in a 55-year-old lady who presented to us with upper abdominal pain for 6 months. A polypoidal gallbladder mass with minimal liver invasion but with multiple subcentimeter pericholedochal, common hepatic, mesenteric, and para-aortic lymph nodes was found on contrast-enhanced computed tomography scan. At laparotomy, the abdomen had milky fluid with engorged beaded lymphatics all over the small intestine. The abdomen was closed over a drain after a lymph node biopsy and collection of the ascetic fluid for analysis. Histopathology confirmed metastatic adenocarcinoma in the lymph node. The triglyceride levels in the ascetic fluid were elevated to 817.00 mg/dl. The patient was put on medium-chain triglyceride diet and a diuretic and recovered well. She was discharged when drain output was nil. Chylous ascites could be a result of abdominal malignancy, post surgery, cirrhosis, and disseminated infections like tuberculosis and filariasis. Treatment is primarily conservative and includes paracentesis/drainage of the peritoneal cavity supplemented by fasting, total parenteral nutrition, and/or diet modification with medium-chain triglyceride diet.

Keywords Cancer gallbladder · Chylous ascites · Tuberculosis · Disseminated malignancy

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Introduction

Gallbladder cancer (GBC) is a rare malignancy of the hepatobiliary tract. GBC that usually presents in an advanced stage as in early-stage GBC has symptoms akin to chronic cholelithiasis and hence is often ignored by the patient. GBC is common in Northern India. Surgical resection (R0) is the only curative treatment for this tumor that is relatively chemotherapy and radiotherapy resistant. Common presenting symptoms of an advanced GBC may include continuous upper abdominal pain, palpable gallbladder/liver, jaundice, ascites, symptoms of gastric outlet obstruction, and cachexia. Chylous ascites is a very rare occurrence in a patient with GBC, and only six cases have been reported thus far to the best of our knowledge [1, 2].

Patient

A 55-year-old lady presented to us with upper abdominal pain for 6 months, and an ultrasound showed mass in the gallbladder. There was no icterus, supraclavicular lymph node, or ascites on clinical examination indicating metastatic cancer. Contrast-enhanced computed tomography (CECT) scan of the patient revealed a polypoidal gallbladder mass and minimal liver invasion but with multiple subcentimeter pericholedochal, common hepatic, mesenteric, and para-aortic lymph nodes. Chest X-ray was normal. The patient had a good performance status of ECOG 1 with normal liver function tests, prothrombin time, and complete blood count. A PET scan could not be obtained due to economic constraints. A laparotomy was performed, as the disease appeared resectable on preoperative staging.

Laparotomy revealed a gallbladder mass with a hard 1.5 cm × 1.0 cm coeliac axis lymph node. Exploration of the

Fig. 1 Engorged beaded lymphatics all over the small intestine

abdomen revealed milky fluid and engorged beaded lymphatics all over the small intestine (Fig. 1). The abdomen was closed over a drain after a lymph node biopsy and collection of the ascetic fluid for analysis. Histopathology confirmed metastatic adenocarcinoma in the lymph node. The triglyceride levels in the ascetic fluid were elevated to 817.00 mg/dl. The patient was put on medium-chain triglyceride diet and a diuretic. In less than a week, the drain output was nil. The total drain was about 500 ml of chylous ascites. The patient is doing well and is now undergoing palliative chemotherapy.

Discussion

Chylous ascites is the presence of chyle in the peritoneal cavity. It may result either due to an obstruction of major lymphatic channels at the base of mesentery or cysterna chyli, direct leak through a lymphoperitoneal fistula, or from exudation through walls of retroperitoneal lymphatics without a visible fistula or thoracic duct obstruction. There could be various reasons for chylous ascites such as abdominal malignancy, post surgery, cirrhosis, and even disseminated infections like tuberculosis and filariasis. Treatment of the underlying cause of chylous ascites is of prime importance. A conservative treatment is usually helpful for most. This includes paracentesis/drainage of the peritoneal cavity supplemented by fasting, total parenteral nutrition (TPN), or diet modification with medium-chain triglyceride diet. This can decrease the lymph flow

in the thoracic duct dramatically from 220 to 1 ml/(kg/h) [3]. With conservative treatment, 60 to 100 % of cases may resolve in 2 to 6 weeks [4]. Somatostatin, peritoneovenous shunt, image-guided sclerotherapy, or surgical intervention with lymphatic duct ligation may be required in refractory cases [5].

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no competing interests.

References

1. Shiina S, Ohshima M, Fujino H, Muto H, Yasuda H, Kawabe T, Tagawa K, Unuma T, Ibukuro K, Inoue Y, et al. (1989) A case of gallbladder cancer manifesting chylous ascites and chylothorax. *Gastroenterol Jpn* 24(2):209–213
2. Sharma BK, Pareek P, Sharma A, Manga IM. Cholelithiasis with perforated gall bladder presenting as chylous ascites—a case report. *IJRRMS*. 2013;3(3).
3. Aalami OO, Allen DB, CH O Jr (2000) Chylous ascites: a collective review. *Surgery* 128:761–778
4. Leibovitch I, Mor Y, Golomb J, Ramon J (2002) The diagnosis and management of postoperative chylous ascites. *J Urol* 167(2pt 1): 449–457
5. Kaas R, Rustman LD, Zoetmulder FA (2001) Chylous ascites after oncological abdominal surgery: incidence and treatment. *Eur J Surg Oncol* 27(2):187–189