

# Chylous ascites after retroperitoneal aortocava lymphadenectomy for endometrial cancer: a case report

C. Goiri Little, R. Ruiz Sautua, L. Martínez Gallardo, T. Bernal Arahall, M.L. Avila Calle

*Obstetrics and Gynecology Department, Donostia University Hospital, Donostia (Spain)*

## Summary

This is a case report of chylous ascites after retroperitoneal aortocava lymphadenectomy for endometrial cancer. There are few reports of chylous ascites in gynecologic surgery. Treatment is primarily conservative. The present case was resolved with a low fat diet with medium-chain triglyceride (MCT) supplements and somatostatin IV.

*Key words:* Chylous ascites; Gynecologic surgery; Para-aortic lymph node dissection; Somatostatin.

## Introduction

Chylous ascites is the accumulation of chyle in the abdominal cavity. It is an uncommon occurrence in the course of treatment for gynecological cancer. In this setting, it can be caused by several mechanisms: leakage from severed lymphatic channels following para-aortic lymph node dissection or as a secondary effect of radiotherapy. Metastatic blockage of the lymphatic channels may also have this effect [1].

Most cases of chylous ascites in gynecologic oncological patients occur in patients who have received radiation therapy after para-aortic lymph node dissection. There are rare reports of chylous ascites following para-aortic lymphadenectomy for gynecological cancer [2-4].

The authors present a case of postoperative chylous ascites in a patient with endometrial cancer, which was successfully managed with conservative measures (paracentesis, low-fat diet, somatostatin IV, and medium-chain triglyceride supplements (MCT)).

## Case Report

A 61-year-old woman, gravida 1, para 1, was diagnosed with endometrial adenocarcinoma via hysteroscopic biopsy after presenting several episodes of postmenopausal bleeding. Her previous medical history included menopause at 52 years and an abdominoplasty. She had been taking tibolone until a few months prior to the diagnosis.

Preoperative magnetic resonance imaging (MRI) revealed a tumor measuring 33 x 26mm, with myometrial infiltration >50%.

Following hospital protocol, she underwent laparoscopic hysterectomy, adnexectomy, bilateral pelvic lymphadenectomy, and retroperitoneal aortocava lymphadenectomy extending to the left renal vein. She was discharged two days later.

On the 9<sup>th</sup> postoperative day she came to the emergency room complaining of back pain. Pelvic ultrasound revealed a liquid collection in the right hypocondrium, compatible with a lymphatic

cyst. A computed tomography (CT) scan showed no signs of internal bleeding and confirmed the finding of a retroperitoneal periaortic liquid collection extending into the pelvis, and compressing the inferior vena cava, which suggested a hematoma without active bleeding. She remained hospitalized for three days and required analgesia with intravenous morphine. After discharge the patient came to the emergency room a second time, where she remained one day for intravenous pain control.

After this episode the patient did not consult again until eight days later (22<sup>nd</sup> postoperative day), this time complaining of progressive abdominal distension during the last three days. Her abdomen was distended and fluctuating, and pulmonary auscultation revealed diminished ventilation in the lower quadrants. Blood work evidenced moderate hypoproteinemia: total proteins were 4.4 g/dl (range 6.4 - 8.3 g/dl) and albumin 23.6 g/l (range 36 - 51 g/l). Her leukocyte, hemoglobin, and hematocrit levels were within the normal range.

Ultrasound revealed a moderate amount of abdominal fluid as well as a retroperitoneal liquid area measuring nine by eight cm. Paracentesis yielded 2.5 l of milky fluid, which led to a diagnosis of chylous ascites.

Treatment was begun with somatostatin IV (six mg / 24h continuously for three days), and a no fat diet with MCT supplements (15 ml / six hours). On the third day of treatment the authors suspended MCT administration due to diarrhea.

The patient improved dramatically and was discharged eight days later. Slight hypoproteinemia persisted (5.5 g/dl), which returned to normal levels in the following weeks. An ultrasound on the day of discharge still showed moderate ascites.

The diet was maintained for three months, and chylous ascites did not recur after suspending it.

## Discussion

Chylous ascites are a rare complication of mediastinal and retroperitoneal surgery, such as aortic aneurysm repair [5] or aortocava lymphadenectomy [2]. It is the result of interrupted intestinal lymphatic flow in its trajectory to or up the thoracic duct [1].

Most reports related to gynecologic oncology are women who developed chylous ascites after lymphadenectomy and abdominal radiotherapy [6]. However in recent years there

Revised manuscript accepted for publication June 24, 2013

has been an increase of reports of chylous ascites in the postoperative period [4, 7].

The initial presentation is usually as painless abdominal distension, usually within days after surgery. If left untreated, it can result in malnutrition and hypoproteinemia, as well as lymphopenia and hypogammaglobulinemia [8]. The diagnosis is aided by paracentesis, which yields a milky white fluid with high triglyceride content [1].

The objective of conservative management is to reduce lymphatic flow and maintain nutrition to facilitate healing of the damaged lymphatic channels. In the present case, this was achieved with a fat-free diet with MCT supplements, as well as somatostatin IV. Total parenteral nutrition is also an option [2].

Long-chain triglycerides enter the blood stream through the lymphatic channels, forming chyle, which is an emulsion of chylomicrons in lymphatic fluid. Eliminating them greatly reduces chyle production. MCTs are absorbed through the portal system, and are a good option for maintaining adequate fat intake during conservative management of the lymphatic leak [9].

Somatostatin or its analogue octreotide decrease the intestinal absorption of fat and reduce lymph production, and are important weapons in the conservative management of chylous ascites.

Conservative management is the cornerstone of postoperative chylous ascites treatment. Evans *et al.* report a 77% success rate in their series of 23 patients with postchemotherapy postoperative chylous ascites [10].

More aggressive interventions include direct surgical repair or peritovenous shunts.

In conclusion, chylous ascites is a rare complication of gynecologic oncologic surgery. Conservative management, consisting of somatostatin IV with or without total parenteral nutrition, is usually effective.

## References

- [1] Aalami O.O., Allen D.B., Organ C.H. Jr.: "Chylous ascites: a collective review". *Surgery*, 2000, 128, 861.
- [2] Takeuchi S., Kinoshita H., Terasawa K., Minami S.: "Chylous ascites following operation for para-aortic lymph node dissection in a patient with cervical cancer". *Int J Gynecol Cancer*, 2006, 16, 418.
- [3] Boran N., Cil A.P., Tulunay G., Ozgul N., Kose M.F.: "Chylous ascites following para-aortic lymphadenectomy: a case report". *Gynecol. Oncol.*, 2004, 93, 711.
- [4] Var T., Güngör T., Tonguc E., Ozdener T., Mollamahmutoğlu L.: "The conservative treatment of postoperative chylous ascites in gynecologic cancers: four case reports". *Arch. Gynecol. Obstet.*, 2012, 285, 849.
- [5] Fukunaga N., Shomura Y., Nasu M., Okada Y.: "Chylous ascites as a rare complication after abdominal aortic aneurysm surgery". *South Med. J.*, 2011, 104, 365.
- [6] Han D., Wu X., Li J., Ke G.: "Postoperative chylous ascites in patients with gynecologic malignancies". *Int. J. Gynecol. Cancer*; 2012, 22, 186. doi: 10.1097/IGC.0b013e318233f24b.
- [7] Tulunay G., Ureyen I., Turan T., Karalok A., Kavak D., Ozgul N., *et al.*: "Chylous ascites: Analysis of 24 patients". *Gynecol. Oncol.*, 2012, 127, 191.
- [8] McGuigan J.E., Purkerson M.L., Trudeau W.L., Peterson M.L.: "Studies of the immunologic defects associated with intestinal lymphangiectasia, with some observations on dietary control of chylous ascites". *Ann. Intern. Med.*, 1968, 68, 398.
- [9] Leibovitch I., Mor Y., Golomb J., Ramon J.: "The diagnosis and management of postoperative chylous ascites". *J. Urol.*, 2002, 167, 449.
- [10] Evans J.G., Spiess P.E., Kamat A.M., Wood C.G., Hernandez M., Pettaway C.A. *et al.*: "Chylous ascites after post-chemotherapy retroperitoneal lymph node dissection: review of the M. D. Anderson experience". *J. Urol.*, 2006, 176, 1463.

Address reprint requests to:  
C. GOIRI LITTLE, M.D.  
Rentería 13 2º izq,  
20012 Donostia (Spain)  
e-mail: consgoiri@gmail.com