

# Surgery for endometrial cancer complicated by postoperative chylous ascites: a case report

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## SUMMARY

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*Chylous ascites is an uncommon condition encountered during the treatment of gynecologic malignancies. In this case, we report the clinical presentation and management of this condition following surgical staging of endometrial cancer.*

**KEY WORDS:** Endometrial Neoplasms; Postoperative Complications; Chylous Ascites

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## INTRODUCTION

Chylous ascites is a condition that is rarely encountered during the treatment of gynecologic cancers and has been reported in less than 30 cases in the English literature (1). Although there are multiple causes (benign and malignant), chylous ascites in cancer patients can be a result of the cancer or the cancer treatment. We report a case of chylous ascites presenting during the postoperative period in a surgically staged endometrial cancer patient.

## CASE REPORT

A 60-year-old diagnosed with a T1aN0M0<sup>1</sup> (FIGO<sup>2</sup> Stage IA) uterine papillary serous carcinoma (UPSC) of the endometrium underwent an uncomplicated staging procedure that included total abdominal hysterectomy, bilateral salpingo-oophorectomy, bilateral pelvic and para-aortic lymphadenectomy (to the level of the inferior mesenteric artery), and infracolic omentectomy. Intraoperative examination failed to demonstrate ascites or evidence of extrauterine spread. Pathologic examination concluded the disease confined to an endometrial polyp without evidence of metastatic spread to the extrauterine structures (total lymph nodes sampled: pelvic-33 and para-aortic 4).

Following postoperative day 4, the patient complained of progressive nausea, vomiting, and increasing abdominal distention. Computed tomography (CT) revealed marked amount of ascites and possible carcinomatosis in the left upper quadrant (Figure 1).



**Figure 1.** Ascites and omental thickening on CT scan. CT = computed tomography. Chylous ascites (thick arrows). Omental thickening (thin arrow).

Paracentesis was performed secondary to the patient's discomfort and it characteristically resembled chylous ascites (2). Cytologic and microbial examination of the ascitic fluid failed to demonstrate any malignancy or infection. The patient was treated with total parenteral nutrition (TPN) and cessation of all oral intakes. Resolution of the patient's symptoms occurred by postoperative day 19. CT examinations were performed postoperatively at 2, 4, 6, 18 and 24 weeks. At the 12-month visit, the patient was clinically and radiographically without evidence of disease with complete resolution of ascites and areas suggestive of carcinomatosis. No adjuvant chemotherapy or radiation was administered.

## DISCUSSION

Overall, the most common cause of chylous ascites in adults is believed to be abdominal malignancy (3). An incidence of 1 per 20,464 has been reported and the diagnosis is typically made during the evaluation of the ascitic fluid (2, 4). In patients with gynecologic malignancies, chylous ascites has been associated with a tumor origin from all sites of the reproductive organs (1). It is generally associated with cancer surgery and treatment but may also represent disease progression.

Para-aortic lymphadenectomy and other gynecologic oncology procedures involving the retroperitoneum are most commonly described in gynecologic patients with chylous ascites (2). Operative trauma to the ascending vertical lumbar lymphatic trunks appears to be the most logical explanation for our patient's accumulation of chyle. Disruption of the vertical lumbar trunks, which are derived from the coalescence of the lymph vessels supplying the lower extremities, genitalia, and pelvic organs, could result in a rapid accumulation (2). Other non-surgical treatments for gynecologic cancers have also been associated with chylous ascites and include radiation therapy and targeted therapies (i.e. bevacizumab) (5-9).

Chylous ascites may be one of the presenting symptoms of disease recurrence or progression. Although, in our case, the likelihood of disease progression within weeks of the staging procedure would be unlikely (10). The accumulation of ascites, nausea and vomiting, and radiographic images of carcinomatosis, in our patient and others, may be clinical signs associated with disease progression in UPSC (11). However, chylous ascites has been described to "mimic" similar conditions including small and large bowel obstruction, ovarian torsion, appendicitis, peritonitis, and conditions that resemble carcinomatosis (12-17).

Treatment of chylous ascites is typically conservative and non-surgical and may result in resolution within a few days to weeks (2). Abdominal discom-

<sup>1</sup> International Union Against Cancer / American Joint Committee on Cancer  
<sup>2</sup> International Federation of Gynecology and Obstetrics

fort and distention can be managed with paracentesis. If diet consisting of high protein, low fat (medium chain triglycerides) does not result in clinical improvement, then total parenteral nutrition with or without somatostatin is effective in 60% to 100% of cases (2). In the past, peritovenous shunting was considered an option for refractory patients, however, shunts may be associated with a high rate of morbidity and malfunction (1).

It is generally believed that the incidence of chylous ascites may increase secondary to longer survival of cancer patients, more aggressive surgical interventions, and increasing use of targeted therapies (3,8,9). Fortunately, the morbidity and mortality associated with chylous ascites appears low, and the outcome is largely dependent upon the underlying cause and management (3). Appropriate identification of this entity and its cause is important because of its potential benign course and resolution with conservative management.

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### Conflict of interest

We declare no conflicts of interest.

### REFERENCES

- 1 Monalitsas TP, Abdessalam S, Fowler JM. Chylous ascites following treatment for gynecologic malignancies. *Gynecol Oncol*. 2001;86:370-4. DOI: 10.1006/gyno.2002.6754
- 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; 16:418-22. DOI: 10.1111/j.1525-1438.2006.00212.x
- 3 Huang Q, Jiang ZW, Jiang J, Li N, Li JS. Chylous ascites: Treated with total parental nutrition and somatostatin. *World J Gastroenterol*. 2004; 10:2588-91.
- 4 Press OW, Press NO, Kaufman SD. Evaluation and management of chylous ascites. *Ann Intern Med*. 1982; 96:358-64.
- 5 Lentz SS, Schray MF, Wilson TO. Chylous ascites after whole-abdominal irradiation for gynecologic malignancy. *Int J Radiat Oncol Biol Phys*. 1990; 19:435-8.
- 6 Reisinger SA, Asbury R, Liao SY, Homesley HD. A phase I study of weekly cisplatin and whole abdominal radiation for the treatment of stage III and IV endometrial carcinoma: A Gynecologic Oncology Group pilot study. *Gynecol Oncol*. 1996; 63:299-303. DOI: 10.1006/gyno.1996.0326
- 7 Lim YK, Kulkarni P, Shaw R, Tay EH. Chylous ascites in recurrent gynaecological malignancies. *Ann Acad Med Singapore*. 2008; 37:621-2.
- 8 Wright JD, Hagemann A, Rader JS, Viviano D, Gibb RK, Norris L, et al. Bevacizumab combination therapy in recurrent, platinum-refractory, epithelial ovarian carcinoma: A retrospective analysis. *Cancer*. 2006; 107:83-9. DOI: 10.1002/cncr.21969
- 9 Wright JD, Secord AA, Numnum TM, Rocconi RP, Powell MA, Berchuck A, et al. A multi-institutional evaluation of factors predictive of toxicity and efficacy of bevacizumab for recurrent ovarian cancer. *Int J Gynecol Cancer*. 2008; 18:400-6. DOI: 10.1111/j.1525-1438.2007.01027.x
- 10 Grice J, Ek M, Greer B, Koh WJ, Muntz HG, Cain J, et al. Uterine papillary serous carcinoma: evaluation of long-term survival in surgically staged patients. *Gynecol Oncol*. 1998; 69:69-73. DOI: 10.1006/gyno.1998.4956
- 11 Hamilton CA, Kapp DS, Chan JK. Clinical aspects of uterine papillary serous carcinoma. *Curr Opin Obstet Gynecol*. 2008; 20:26-33. DOI: 10.1097/GCO.0b013e3282f2b10d
- 12 Fang FC, Hsu SD, Chen CW, Chen TW. Spontaneous chylous peritonitis mimicking acute appendicitis: A case report and review of the literature. *World J Gastroenterol*. 2006; 12:154-6.
- 13 Kang CM, Kim S, Kim BW, Kim KS, Choi JS, Lee JW, et al. Acute chylous peritonitis mimicking ovarian torsion in a patient with advanced gastric carcinoma. *J Korean Med Sci*. 2007; 22:164-6. DOI: 10.3346/jkms.2007.22.S164
- 14 Michel P. Chyloperitoneum complicated by intestinal occlusion. *Presse Med*. 2004; 33:247-9. DOI: PM-02-2004-33-4-0755-4982-101019-ART7
- 15 Murugan K, Spence RA. Chylous peritonitis with small bowel obstruction. *Ulster Med J*. 2008; 77:132-3.
- 16 Vettoretto N, Odeh M, Romessis M, Pettinato G, Taglietti L, Giovanetti M. Acute abdomen from chylous peritonitis: a surgical diagnosis. Case report and literature review. *Eur Surg Res*. 2008; 41:54-7. DOI: 10.1159/000129599
- 17 Kim HS, Park MI, Suh KS. Lymphangiomyomatosis arising in the pelvic cavity: A case report. *J Korean Med Sci*. 2005; 20:904-7. DOI: 10.3346/jkms.2005.20.5.904