ACQUAINT PUBLICATIONS ....Disseminate your Research

Journal of Medical Case Reports and Case Series ISSN: 2692-9880

Case Report Volume 4 Issue 09

Female Patient With Massive Refractory Chylous Ascites Following Paraaortic Lymph Node Biopsy.

Igors Ivanovs[1], Aina Kratovska[2], Uģis Eida[3], Grēta Smirnova[4*]

[1]M.D., Assoc. Prof. University of Latvia, Faculty of Medicine, Department of Surgery, Riga, Latvia.

[2]M.D., Assistant Riga Stradins University, Faculty of Medicine, Department of Radiology, Riga, Latvia.

[3]M.D Riga East University Hospital, Riga, Latvia.

[4]6th year medical student Riga Stradins University, Riga, Latvia.

[*]**Corresponding Author:** Grēta Smirnova, 6th year medical student Riga Stradins University, Riga, Latvia.

Received date: 28 April 2023; **Accepted date:** 18 May 2023; **Published date:** 23 May 2023

Citation: Ivanovs I, Kratovska A, Eida U, Smirnova G (2023) Female Patient With Massive Refractory Chylous Ascites Following Paraaortic Lymph Node Biopsy. J Med Case Rep Case Series 4(09): https://doi.org/10.38207/JMCRCS/2023/MAY04090552

Abstract

Objective: This clinical case examines rare complications after para-aortic lymph node biopsy and the difficulties in diagnosis and treatment.

Background: Chylous ascites has a low incidence risk, more often affecting patients with a history of malignancy.

Presentation: A 41-year-old woman with a history of ovarian carcinoma presented with abdominal distension, epigastric pressure, and dyspnea after a para-aortic lymph node biopsy. The ultrasonography and paracentesis of the abdominal cavity confirmed the diagnosis of high-volume chylous ascites, refractory to surgical and conservative treatment.

Discussion: Although a rare complication, it is initially treated conservatively; in cases where it is necessary to close the site of lymphorrhea, surgical treatment is used. In this case, diagnosing the source of lymphorrhea is difficult, so all applied treatment methods are short-termed or ineffective.

Conclusion: This work describes a rare case of massive refractor chylous after lymph node biopsy and possible ways of management.

Keywords: Case report, refractory chylous ascites, lymphorrhea.

Introduction

Chylous ascites (CA) are a rare form formed by lymph accumulation in the peritoneal space. Accumulation is caused by impaired or blocked lymph flow from major lymphatic vessels. CA is characterized by a white, milky fluid with high triglyceride levels (> 110 mg/dl). **[1]** The most common cause is malignancy; other causes include nephrotic syndrome, cirrhosis, infections such as tuberculosis, previous abdominal surgery, or anatomic malformations of the lymphatic vessels. Clinical symptoms are usually painless abdominal distension, abdominal pressure, and dyspnea. **[2]** Late diagnosis can lead to weight loss, electrolyte imbalance, hypoproteinemia, and even death. To start a successful treatment, it is necessary to localize the site of lymph leakage using imaging methods such as ultrasonography (USG), computer tomography (CT), lymphography, lymphoscintigraphy, or, in rare cases, diagnostic laparoscopy. **[3]** Initial therapy includes adequate nutrient intake, reducing lymph production, and treating the cause of lymphorrhea. The patient is prescribed a high-protein, low-fat diet, diuretics, and total parenteral nutrition (TPN); in rare cases, if the condition does not improve, somatostatin analogs are added to the treatment, and the need for surgical treatment is discussed. **[4]** In this case, a 41-year-old female patient with a rare, life-threatening massive refractory CA was examined when determining the source of lymphorrhea was impossible, and conservative surgical therapy was unsuccessful.

Case Presentation

A 41-year-old woman with a history of ovarian carcinoma and total hysterectomy (2019). In 2022/08, a para-aortic lymph node biopsy was performed at Tartu University Hospital, after which the abdominal volume increased. The patient is hospitalized in a regional hospital, where a diagnosis of CA is established after USG and paracentesis. Initially, outpatient treatment with diuretics was unsuccessful; the patient had a Pigtail drain placed in the abdominal cavity and was hospitalized. As the condition gradually worsens on 08.11.2022., the patients were transferred to the Riga Eastern Clinical University Hospital. At the time of arrival, the patient was disoriented, hemodynamically unstable: BP 80/ 60, heart rate 92 x/min, SpO2 95 %, laboratory tests – Leu 19.45 10^3/uL; Er 5.99 10^6; HGB 18.30 g/dL; PLT 104 10^3/uL; Urea 19.80 mmol/L; Creatinine 278 µmol/L; Troponin 28.60 ng/L; Procalcitonin 0.39 ng/mL, arterial blood gases (Temp 37O, FiO2 21 %) pO2 29 mmHg; Na+ 112 mmol/L; K+ 6.8 mmol/L; Cl- 81 mmol/L; Ca++ 1.10 mmol/L; Lac 2.0 mmol/L. They are hospitalized in the intensive care unit (ICU) with dehydration, electrolyte imbalance, hypoproteinemia,

and acute renal failure. The ICU stabilizes the hemodynamic status by starting noradrenaline 4mg/50ml in perfusion, provides rehydration, and starts TPN with *SmofKabiven extra Nitrogen* 1012ml and *Sand statin* 0.1mg/ml subcutaneous injections three times a day, and human albumin is transfused several times. The general condition improved, but the chylous fluid continued to flow from the drain 2 – 4 L/day. Lymphography of the right and left side **(Figure 1)** and lymphoscintigraphy are performed. Lymphography is difficult due to the small size of the lymph nodes. Delayed lymphatic return from the lower extremities and return block under the *cisterna chyli* is observed; data on extravasation is not obtained. **(Figure 1) (Figure 2).**

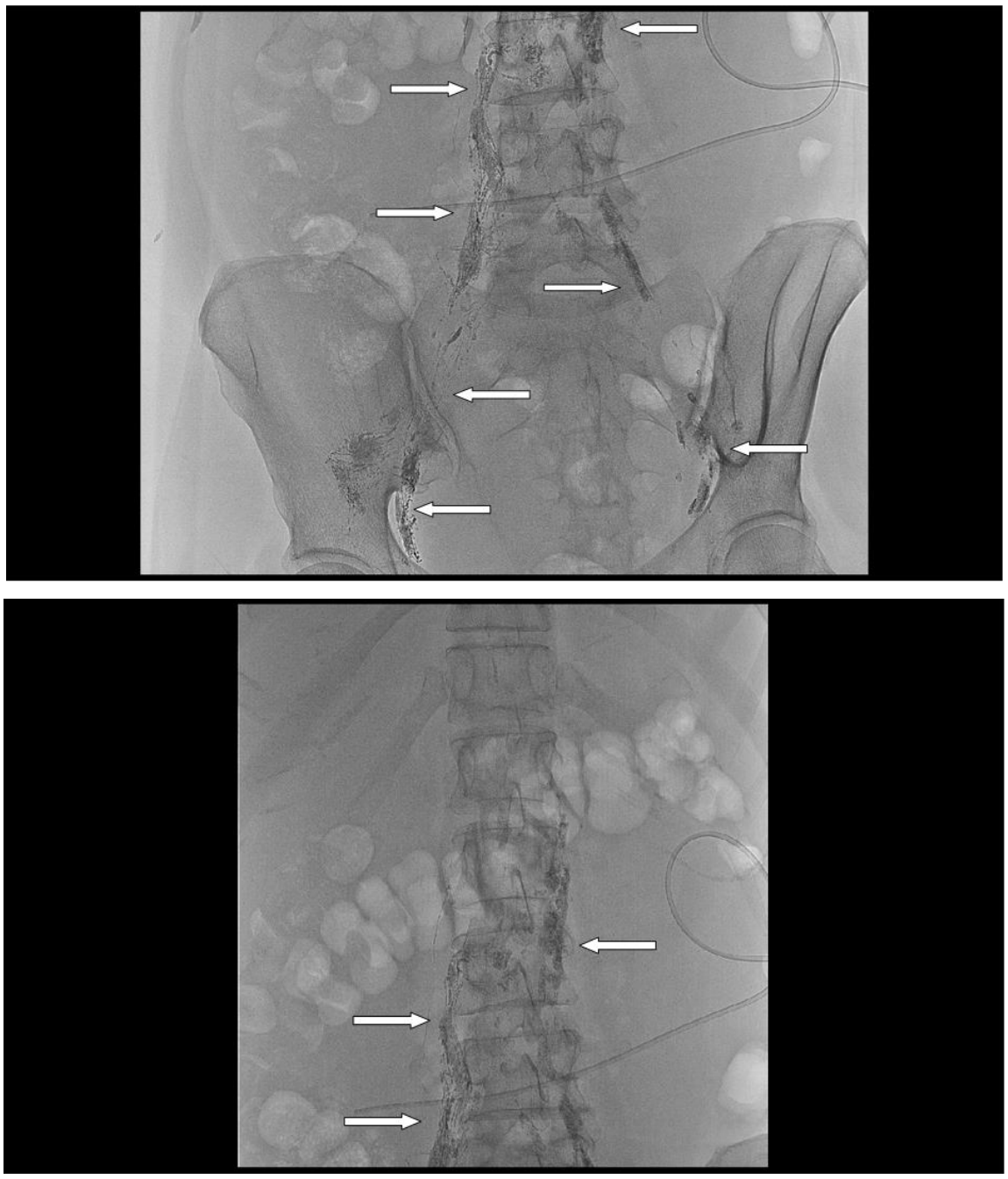

Figure 1: Lymphography, observes the spread of the contrast agent up to the L1 level.

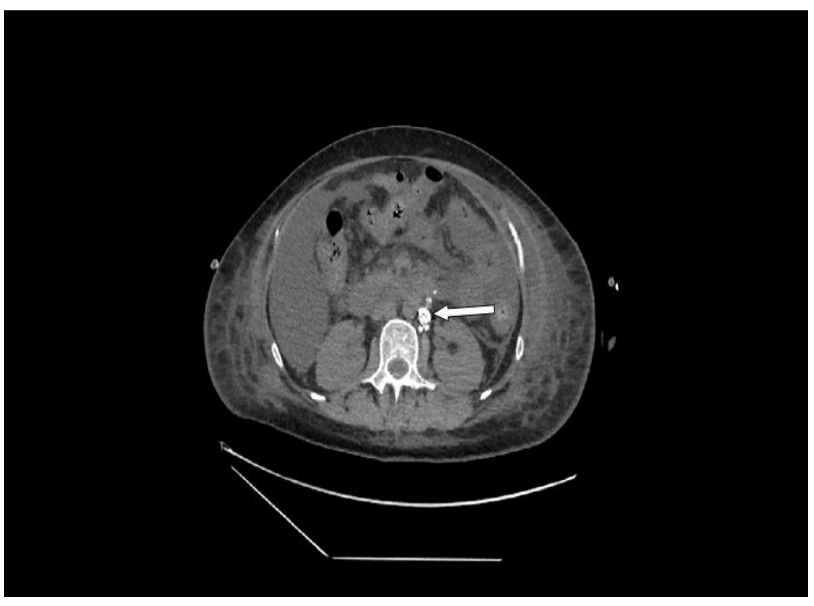

Figure 2: CT in native with contrast agent after lymphography shows the spread of contrast material in lymphatic vessels up to the L1 level.

A multidisciplinary board of doctors is called for further surgical examination. The patient undergoes a diagnostic laparoscopy of the abdominal cavity, but the site of lymphorrhea is not found during the operation. Continuing the treatment, > 2l of fluid per day is still released from the abdominal cavity. On 29.01.2023, the patient started having vague febrile episodes and developed a secondary bacterial infection; antibacterial therapy was initiated. Episodes of febrility disappear, laboratory parameters improve, and the fluid discharged through the drain remains clearer and decreases in volume until it disappears completely. The drain was evacuated. The patient

was released satisfactorily for further outpatient treatment after 93 days in the hospital.

05.03.2023 patient returns with symptoms of the exact nature. Knowing the diagnosis this time, the Pigtail drain is re-inserted into the abdominal cavity; chylous fluid begins to flow. The same conservative treatment as the first time is started, and improvement is observed. Since the place of lymph flow was not determined during the first hospitalization, bilateral inguinal lymphography is repeated. Performing the procedure is tricky; on the right side, the lymph node is punctuated successfully, but the spread of the contrast agent is not observed. Puncture is not possible on the left side due to the small diameter of the lymph node. In addition, retrograde transvenous ductus thoracicus catheterization attempts are performed. *V. cephalic* is minimal in diameter and thread-like; catheterization is impossible. *V. basilica* puncture is difficult due to spasticity, the puncture was performed, but the string insertion was unsuccessful. Under USG control, *v. femoralis communis sinistra* puncture is performed by inserting a catheter into *v. brachiocephalic sinistra*. In the form of selective catheterization, phlebography of the confluence zone of *v. subclavia et v. jugularis interna* is performed, where 80% stenosis of the ostial parts of *v.brachiocephalica* at the inlet of *v. cava superior* is verified. **(Figure 4)** there is also an extensive pattern of collaterals and reflux to the cervical branches **(Figure 5)**. Repeated attempts to locate the *ductus thoracicus* inlet make catheterization technically impossible. Discharge from the drain has stopped. A patient with a pigtail drain is discharged from the hospital for further outpatient follow-up. After 1 month of follow-up, no fluid was found in the abdominal cavity, and the Pigtail drain was removed.

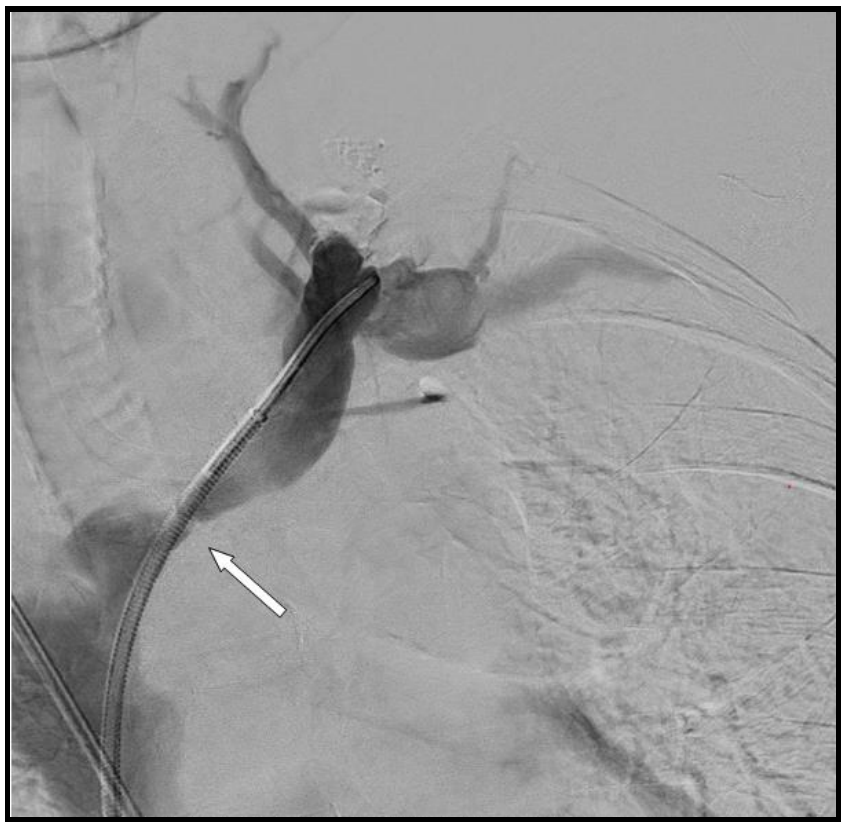

Figure 4: *V.brachiocephalica sinistra* ostial part stenosis, at the of inlet *v.cava superior*.

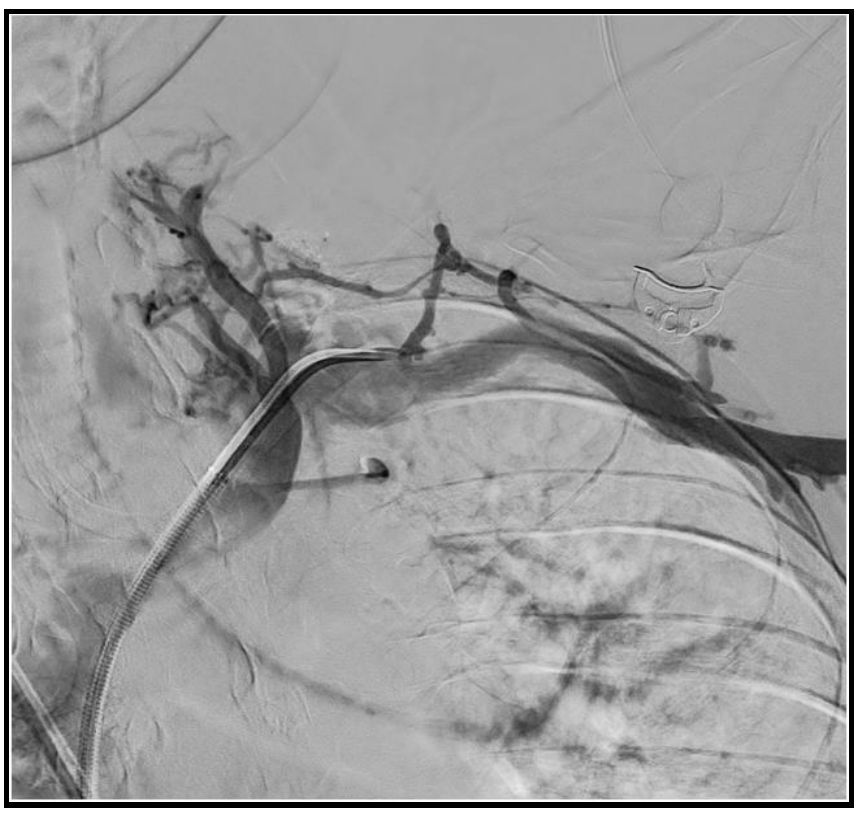

Figure 5: Extensive pattern of collaterals, reflux of contrast material to the cervical venous branches.

Discussion

The incidence of CA is unclear, with 1:50,000 or 1:100,000 cases reported for all lymphatic abnormalities. **[5]** Although the literature describes the formation of CA after lymph node biopsy, such cases are few. **[6]** In the various cases mentioned in the literature, the fluid loss is not so extensive, and the ascites respond well to conservative therapy, or refractory ascites have developed for some other reason, such as lymphangiectasias. The literature has not described massive refractory chylous ascites after lymph node biopsy. Basic treatment principles are related, but no gold standard has been established. **[4]** There is controversy in the literature regarding monotherapy with a low-fat, high-protein diet, diuretics, or TPN; the best outcome is to combine at least one of the above methods with abdominal paracentesis. **[4]** In the works mentioned in the literature, the diagnosis has always been successful, and the applied conservative or surgical therapy has been effective. In this case, the first phase of the patient's hospitalization was challenging, as it was necessary to resolve the life-threatening conditions because of high volume losses and simultaneously localize and treat the source of the lymphorrhea. During the first stage of hospitalization, the CA probably resolved due to abdominal infection, the inflammatory infiltrate closing the damaged area, and stopping the lymphorrhea. However, in the second hospitalization stage, anatomical abnormality of *v.brachiocephalica sinistra* was found, which could be the reason for refractory ascites. Due to the patient's anatomical features, performing *ductus thoracicus* retrograde lymphography was repeatedly impossible. Fortunately, conservative treatment in the second hospitalization stage was effective, and leakage stopped spontaneously. After 1 month of follow-up, chylous ascites have not returned.

Conclusion

We describe a rare case of refractory chylous ascites after lymph node biopsy. Such cases are not described in the literature. In this case, we want to show such patients' treatment tactics and difficulties.

Abbreviations

BP: Blood pressure

CA: Chylous ascites

CT: Computerized Tomography

ICU: Intensive care unit

TPN: Total parenteral nutrition

USG: Ultrasonography

Conflict of interest: All Authors have no conflict of interest.

Patient consent for publication:

Funding: No funding received

References

1. Solmaz U, Turan V, Mat E, Dereli ML, Ekin A, et al. (2015) Chylous ascites following retroperitoneal lymphadenectomy in gynecologic malignancies: Incidence, risk factors and management. Int J Surg. 16(Pt A): 88-93.
2. Privratsky AM, Barreto JC, Turnage RH (2022) Sabiston Textbook of Surgery. Chapter 44 Abdominal Wall, Umbilicus, Peritoneum, Mesenteries, Omentum and Retroperitoneum. 1080-1104.
3. Thompson JR, Pipinos II (2022) Sabiston Textbook of Surgery, Chapter 66 The Lymphatics. 1834-1842.
4. Aalami OO, Allen DB, Organ CH Jr (2000) Chylous ascites: A collective review. 128(5): 761-78.
5. Browse NL, Wilson NM, Russo F, al-Hassan H, Allen DR (1992) Aetiology and treatment of chylous ascites. 79(11): 1145–1150.
6. Kong TW, Chang SJ, Kim J, Paek J, Kim SH, et al. (2016) Risk factor analysis for massive lymphatic ascites after laparoscopic retroperitonal lymphadenectomy in gynecologic cancers and treatment using intranodal lymphangiography with glue embolization. Journal of gynecologic oncology. 27(4): e44.