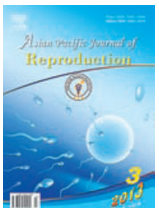
Asian Pacific Journal of Reproduction

Journal homepage: www.apjr.net



Document heading doi: 10.1016/S2305-0500(13)60157-8

Chylous fistula following scalane lypmhadenectomy in a patient with advanced cervical cancer

Isin Ureyen, Alper Karalok, Nurettin Boran, Taner Turan, Gokhan Tulunay

Etlik Zubeyde Hanim Women's Health Teaching and Researching Hospital, Gynecologic Oncology Division, Etlik Street, Kecioren/AnKara/Turkey

ARTICLE INFO

Article history:
Received 21 January 2013
Received in revised form 20 February 2013
Accepted 25 February 2013
Available online 20 September 2013

Keywords:
Chylous fistula
Cervical carcinoma
Scalene lymphadenectomy

ABSTRACT

Chylous fistula is a rare condition that results from injury to the thoracic duct. Management is challanging, since it's a rare condition and there is no consensus on its treatment. Scalene lymphadenectomy is performed rarely in gynecological oncology and so chylous fistula is a much less frequent phenomenon. We present a case of chylous fistula folowing scalene lymphadenectomy in a patient with advanced cervical carcinoma that was resolved after administration of chylous diet.

1. Introduction

Chylous fistula that results from injury to the thoracic duct occurs in 1.0%-2.5% of patients undergoing neck dissection [1]. Management is challanging, since it's a rare condition and there is no consensus on its treatment. While it may cause local effects such as dermal irritation, delayed wound healing and even great vessel compromise, it may also impair nutrition resulting in metabolic disturbances, depressed immunity and finally it may prolong hospitalization [1-3].

In cervical cancer, metastasis in scalene lymph nodes was detected in 18.2% and 27.3% of patients with gross para-aortic involvement and clinically non-suspicious scalene lymph nodes [4]. Involvement in scalene lymph nodes that means disseminated disease in cervical carcinoma necessitates palliative treatment methods preventing aggressive surgery and extensive radiation [5].

*Corresponding author: Isin Ureyen.Address: Etlik Zubeyde Hanim Women's Health Reseach and Teaching Hospital, Gynecologic Oncology Division, Etlik Street, Post code: 06010, Kecioren / Ankara / Turkey.
Tel: +90 312 3220180
Fax: +90 312 3238191
E-mail: isin.ureyen@gmail.com

Here we present a case of chylous fistula folowing scalene lymphadenectomy in a patient with advanced cervical carcinoma that was resolved after administration of chylous diet.

2. Case report

A 42-year- old woman presented to our department with stage 2B cervical cancer in November 2012. During performance of the extraperitoneal lymphadenectomy, enlarged lymph nodes greater than 2 cm up to the level of left renal vein and adherent to around tissue were observed. Frozen section analysis of these lymph nodes revealed metastasis with capsular invasion. Following the removal of all enlarged lymph nodes in the para-aortic and pelvic regions, scalene lymphadenectomy was performed. Through a supra clavicular transverse incision left scalenic fat pad including scalenic nodes was resected. The procedure was ended by the placement of a pernicious drain to this area. In the third postoperative day the pernicious drain was taken. Then a swelling in the scalene region was observed. 20 cc of blurred fluid was aspirated from this region. The biochemical analysis of this fluid showed a triglyseride level of 276 mg/dL. Since chylous fistula was considered,

a diet with low fat with medium-chain triglycerides and high protein was introduced and local pressure dressing was applied. Although she required re-aspiration of the fluid in the first day of the diet, then the swelling didn't recur and she continued diet for 1 month without a requirement of intervention.

Her final pathology result demonstrated metastatic lymph nodes in both the pelvic and paraaortic regions, since there was no metastasis in 5 scalene lymph nodes resected. She was consulted to the radiation oncology clinic.

3. Discussion

Chylous fistula is a rare phenomenon but it may result in possible devastating conditions. Although it is seen in the left side in the majority of patients, it may also be observed in the right side as a result of injury to the right lymphatic duct in the neck. Other than neck dissections, damage to thoracic duct may also occur after penetrating neck trauma, cervical node biopsy and cervical rib resection [2]. The variability in the anatomy and termination of the thoracic duct subject it to damage in head and neck surgeries. Since Cheever reported the first case of intraoperative thoracic duct injury in 1875, it has been presented in many case reports [6].

Management of chylous fistula is contraversial, since it is a rare condition. If it is recognised during surgery, ligation of it with non-absorbable sutures, usage of sclerosing agents and tissue adhesives or various local and regional flaps are suggested [1, 3, 7]. If it is overlooked during surgery, it may be suspected by high drain output or a swelling in the neck and can be confirmed by the milky appearance or biochemical analysis of the fluid. A triglyceride level equal or greater than 100 mg/dL is suggestive of chylous fistula [8]. If it is disgnosed postoperatively, there are conservative and surgical management options. Since long chain triglycerides are the major determinant of the amount of lymph flow and medium-chain triglycerides (MCT) are absorbed directly into the portal venous system without entering the lymphatic system, low fat MCT diet may be an option [1, 9]. Total parenteral nutrition (TPN) provides the total bypass of fat through digestive tract and a good nutrition for the patient. Therefore, TPN is suggested as a first option for management of chylous fistula by some authors [2]. Somatostatin and its analogue octreotide can be tried with or without dietary modifications [10]. Surgical and interventional methods are percutaneous lymphangiography-guided cannulation with embolization of the thoracic duct, thoracoscopic ligation of the thoracic duct and re-exploration of the wound and repair [2].

While neck dissection is an essential part of surgery associated with head and neck diseases, it is also a significant step in the evaluation of patients with metastatic para-aortic lymph nodes in cervical carcinoma [5]. To our knowledge, this the first reported case of chylous fistula that occured in a patient with cervical carcinoma after scalene lymphadenectomy.

Scalene lymphadenectomy is performed rarely in gynecological oncology and so chylous fistula is a much less frequent phenomenon. Nevertheless, management of chylous fistula after neck dissections remains problematic. Therefore, it is important to be aware of this condition and to prevent chylous fistula during the initial surgical procedure. It necessitates a meticulous surgical technique and a detailed knowledge of the anatomy of this region.

Conflict of interest statement

The authors declare no conflict of interest.

References

[1] Ilczyszyn A, Ridha H, Durrani AJ. Management of chyle leak post neck dissection: a case report and literature review. *J Plast Reconstr Aesthet Surg* 2011; **64**(9): 223-230.

[2] Brennan PA, Blythe JN, Herd MK, Habib A, Anand R. The contemporary management of chyle leak following cervical thoracic duct damage. *Br J Oral Maxillofac Surg* 2012; **50:** 197-201.

[3] Lucente FE, Diktaban T, Lawson W, Biller HF. Chyle fistula management. *Otolaryngol Head Neck Surg* 1981; **89**(4): 575-578.

[4] Samouëlian V, Baranzelli MC, Narducci F, Taïeb S, Cabaret V, Querleu D, et al. Is systematic scalene node biopsy in pretreatment evaluation of locally advanced cervical carcinoma necessary? Systematic dissection and histopathology of left scalene node biopsies in patients with locally advanced cervical carcinoma. *Gynecol Oncol* 2006; **103**(3): 1091-1094.

[5] Boran N, Kayikçioğlu F, Tulunay G, Kose MF. Scalene lymph node dissection in locally advanced cervical carcinoma: is it reasonable or unnecessary? *Tumori* 2003; **89**(2): 173-175.

[6] Allen DP, Briggs CE. Wounds of the thoracic duct occurring in the neck: report of 2 cases. Resume of 17 cases. *Am Med* 1901; **20**: 401-404.

[7] Jong-Lyel Roh CIP. OK-432 sclerotherapy of cervical chylous lymphocele after neck dissection. *Laryngoscope* 2008; **118**(6): 999-1002.

[8] Rodgers GK, Johnson JT, Petruzzelli GJ, Warty VS, Wagner RL. Lipid and volume analysis of neck drainage in patients undergoing neck dissection. *Am J Otolaryngol* 1992; **13**(5): 306-309.

[9] Ablan CJ, Littooy FN, Freeark RJ. Postoperative chylous ascites: diagnosis and treatment. A series report and literature review. *Archives of surgery* 1990; **125**(2): 270-273.

[10] Valentine CN, Barresi R, Prinz RA. Somatostatin analog treatment of a cervical thoracic duct fistula. *Head Neck* 2002; **24**(8): 810-813.