

Case Report

Chylous Fistula Following Mastectomy

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Abstract

Though chyle leakage after axillary dissection is a rare occurrence, sometimes it becomes difficult to manage. All surgeons dealing with breast should be aware with this unusual complication and its management.

Key words: Chylous fistula; Mastectomy; Axillary dissection

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Introduction

Axillary lymph node dissection is a common procedure after breast cancer surgery.¹ Chylous leakage may result from various surgical procedures of different types, such as neck or thoracic surgery.² Chylous leakage after axillary lymph node dissection is infrequent with an incidence of less than 0.5%.¹ Though most of chylous leakage cases are treated conservatively, we managed a case with tetracycline. That is why we report a case of chylous leakage after axillary lymph node dissection that was treated with tetracycline.

Case report

A 48-year-old lady was admitted as FNAC proven carcinoma of left breast. She had 8 cycles of neoadjuvant chemotherapy. She underwent modified radical mastectomy with level 2 axillary clearance. Two suction tubes were placed at axilla and under mastectomy site. From the second postoperative day the patient started discharging milky fluid through the drains. Patients were treated conservatively and the drains were removed on 10th–post operative day and the patient was discharged. But patient came back to OPD with huge collection under the flap. Aspiration revealed about 700 mL of milky fluid. Repeated aspiration done on the next follow-

up showed that colour of the fluid remained same. Injection tetracycline was given two times. Discharge became less and ultimately stopped with conservative treatment. No cytological, microbiological and biochemical study was done.

Discussion

Chylous leakage seldom occurs in axillary surgery because the axilla is anatomically remote from the thoracic duct.² Several small cases series reports incidences ranging from 0.36% to 0.84%.³ Chyle leaks generally result from the injury to the thoracic duct.³ The anatomy of the thoracic duct is well-documented and there are numerous variations in the pattern and site of the thoracic duct in the venous system.⁴ The majority of the variability seen in the thoracic duct involve its termination into one of the several veins including: the internal jugular, external jugular and innominate veins.³ Some studies have demonstrated branching of the duct up to 30% of cases³ and multiple terminations into venous system in 4% cases.⁴ A rare anatomical variation of the lymphatic trunk posteroinferior to the axillary vein was supposed to be the cause of chylous leakage after mastectomy.⁵ Some author suggests that axillary chyle leaks are due to injury to an aberrant branch of the thoracic duct.⁶

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One study suggests that there could be reflux of chyle through the lymphatics if the subclavian duct/trunk is aberrantly inserted into the thoracic duct.⁷

The diagnosis of a chyle leak is a clinical one based on the presence of milky white discharge. This drainage increases with high fat meals and resolves with fasting. Laboratory testing can be used as an adjunct with examination of the fluid for triglycerides, cholesterol, protein, lipid electrophoresis, cell counts and pH.^{3,8} Lymphoscintigraphy has also been demonstrated as an effective diagnostic tool.³

As the patient was fasting during surgery without significant production of chylomicrons, it is uncommon to detect chyle leakage during surgery.³ Most of the chylous leakage occurs on 1st or 2nd postoperative day as patients return to oral feeding by that time.⁶ One study reported intraoperative detection of chyle leakage in two patients among six where both the patients were early morning case.⁷ They were able to identify intraoperative leakage on reexploration by intentionally feeding them a high fatty meal just before patient was kept NPO.⁷

Most of the reported cases are managed by conservative measures that includes low fat diet, pressure dressing. Though intravenous octreotide is a treatment option for chylous fistula of neck, it is used successfully in a case of chyle leakage after axillary surgery.¹

Leakage after neck dissection has been treated with local injection of tetracycline⁹; but as far as we know this is the first case that is treated with tetracycline after axillary lymphadenectomy.

Surgical re-exploration and ligation of the leakage is advocated when leakage persists more than two weeks, drainage volume is more than 1L/day even after one week or the patient develops metabolic complication.³ Suture ligation and clip application are main surgical option. Gel foam, oxidized cellulose and tissue glue can be used as topical agent.³ Coverage with muscle flap also has been advocated by some authors.^{5,7}

References

1. González-Sánchez-Migallón E, Aguilar-Jiménez J, García-Marín JA, Aguayo-Albasini JL. Chylous Fistula following Axillary Lymphadenectomy: Benefit of Octreotide Treatment. *Case Rep Surg* 2016; 2016: 6098019.
2. Baek JM, Lee JA, Nam YH, Sung GY, Lee DS, Won JM. Chylous Leakage: A Rare Complication after Axillary Lymph Node Dissection in Breast Cancer and Surgical Management. *J Breast Cancer* 2012; 15(1): 133–134.
3. Daggett JD, Watt AW, Smith PD. Chyle leak following right axillary lymph node dissection: A case report and review of current literature. *Int J Surg Case Rep* 2016; 20: 68–73.
4. GREENFIELD J, GOTTLIEB MI. Variations in the terminal portion of the human thoracic duct. *AMA Arch Surg* 1956; 73(6): 955–959.
5. Purkayastha J, Hajarika S, Deo SV, Kar M, Shukla NK. Post-mastectomy chylous fistula: Anatomical and clinical implications. *Clin Anat* 2004; 17(5): 413–415.
6. Taylor J, Jayasinghe S, Barthelmes L, Chare M. Chyle Leak Following Axillary Lymph Node Clearance – a Benign Complication: Review of the Literature. *Breast Care* 2011; 6(2): 130–132.
7. Singh M, Deo SS, Shukla NK, Pandit A. Chylous Fistula After Axillary Lymph Node Dissection: Incidence, Management, and Possible Cause. *Clin Breast Cancer* 2018; 11(5): 320–324.
8. Maldonado F, Hawkins FJ, Daniels CE, Doerr CH, Decker PA, Ryu JH. Pleural Fluid Characteristics of Chylothorax. *Mayo Clin Proc* 2009; 84(2): 129–133.
9. Metson R, Alessi D, Calcaterra TC. Tetracycline sclerotherapy for chylous fistula following neck dissection. *Arch Otolaryngol - Head & Neck Surg* 1986; 112(6): 651–653.