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LYMPHATICOVENOUS ANASTOMOSIS FOLLOWING THORACIC DUCT INJURY

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INTRODUCTION

- Thoracic duct injury with chyle leak is a disastrous event with high morbidity.
- Rare complication 3% of chyle leak during a neck dissection
- Most commonly injured at level IV neck dissection



de Gier HH, Balm AJ, Bruning PF, Gregor RT, Hilgers FJ. Systematic approach to the treatment of chylous leakage after neck dissection. Head Neck 1996;18:347–51.

CASE REPORT

- * 58 years old Malay gentleman
 - * Albinism
 - Multiple squamous and basal cell carcinoma
- Presented with enlarged left cervical and supra-clavicular lymph nodes with extension to mediastinum
 - ----> Modified radical neck dissection (level I to V)
 - * Encasing the subclavian v. & thoracic duct
 - * Thoracic duct was ligated with titanium clips

- * On day 2 post op chylous fluid in the drain
- * Initially conservative -->
 - * Drain >500ml/day
 - Neck was swollen on day 5 (blocked drain)
- * Exploration surgery
 - * Multiple small tears
 - * Titanium clip was dislodged



Nussenbaum, B., J.H. Liu, and R.J. Sinard, Systematic management of chyle fistula: the Southwestern experience and review of the literature. Otolaryngology-Head and Neck Surgery, 2000. **122**(1): p. 31-38.

LYMPHATICOVENOUS ANASTOMOSIS



Fig 1. (A) Large amount of milky white coagulum in the supraclavicular cavity. (B) Lymphaticovenous anastomosis between the thoracic duct and the anterior jugular vein (end to side)

DISCUSSION

- * Which management for thoracic duct injury is the best?
 - * Non surgical
 - * Surgical



- * Indication for a surgical intervention:
 - * High volume chyle leakage
 - * Need for early commencement of chemo-radiotherapy
- * Lymphaticovenous anastomosis:
 - To restore the physiological lymphatic transport capacity into the venous system
 - * Reduce pressure in the ligated thoracic duct
 - Without the need to open up the collaterals leading to the right thoracic duct or azygos vein and its branches.
 - Shorter hospitalization

Ilczyszyn, A., H. Ridha, and A.J. Durrani, *Management of chyle leak post neck dissection: A case report and literature review.* Journal of Plastic, Reconstructive & Aesthetic Surgery, 2011. **64**(9): p. e223-e230.

CONCLUSION

- Thoracic duct injury is rare but may cause a high morbidity and mortality if no early intervention is being carried out.
- * In this era of microsurgery, lymphaticovenous anastomosis could be achieved in replacement of ligation of the thoracic duct as the immediate surgery.

REFERENCES

- Teymoortash, A., et al., Postoperative morbidity after different types of selective neck dissection. The Laryngoscope, 2010. 120(5): p. 924-929.
- * Brennan, P., et al., *The contemporary management of chyle leak following cervical thoracic duct damage*. British Journal of Oral and Maxillofacial Surgery, 2012. **50**(3): p. 197-201.
- * Gregor, R., *Management of chyle fistulization in association with neck dissection.* Otolaryngology--Head and Neck Surgery, 2000. **122**(3): p. 434-439.
- * de Gier, H.H., et al., Systematic approach to the treatment of chylous leakage after neck dissection. Head & neck, 1996. **18**(4): p. 347-351.
- Ilczyszyn, A., H. Ridha, and A.J. Durrani, *Management of chyle leak post neck dissection: A case report and literature review.* Journal of Plastic, Reconstructive & Aesthetic Surgery, 2011. 64(9): p. e223-e230.
- * Cope, C., *Management of chylothorax via percutaneous embolization*. Current opinion in pulmonary medicine, 2004. **10**(4): p. 311-314.
- Nussenbaum, B., J.H. Liu, and R.J. Sinard, Systematic management of chyle fistula: the Southwestern experience and review of the literature. Otolaryngology-Head and Neck Surgery, 2000. 122(1): p. 31-38.
- Santaolalla, F., et al., Management of chylous fistula as a complication of neck dissection: a 10-year retrospective review. European journal of cancer care, 2010. 19(4): p. 510-515.

THANK YOU