LYMPHATICOCOVENOUS ANASTOMOSIS FOLLOWING THORACIC DUCT INJURY

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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

- 3-5L lymph fluid per day
- 2-3mm in diameter, paper thin

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

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)
Which management for thoracic duct injury is the best?

- Non surgical
- Surgical
Management of chyle leak

Non surgical
- Medical
  - Local compression, Vacuum drainage
  - Fat free diet or medium chain triglyceride, TPN
  - Somatostatin
- Interventional
  - Percutaneous embolization
- Surgical
  - Lymphaticovenous anastomosis
  - Ligation (open method / laparoscopic)
  - Fibrin glue + vicryl mesh/collagen felt
  - Local muscle flap
  - Sclerosant (eg. porvidone iodine, tetracycline, OK 432)

Surgical Lymphaticovenous anastomosis
* 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

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

THANK YOU