

THORACIC DUCT INJURY DURING NECK DISSECTION - HOW CAN WE BEST MANAGE ON THE TABLE?

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Background:

Chyle leak is an uncommon (between 1.0 and 6.2%) but potentially morbid complication of both neck dissection and thyroid surgery. It can be difficult to manage postoperatively and often results in a prolonged hospital stay. Diagrams illustrate normal anatomy of thoracic duct.

Aim:

To identify current best practice for intraoperative surgical management of iatrogenic thoracic duct injury during lower neck procedures.

Methods:

A systemic literature review was performed using Medline through PubMed and EMBASE. A total of 432 peer-reviewed articles were identified using key words thoracic duct injury or trauma. This was rationalised to 50 publications referring to intraoperative surgical management of iatrogenic thoracic duct injury during lower neck procedures.

Results:

We identified patient, disease and surgical risk factors for chyle leak during lower neck procedures, and intraoperative detection techniques. Formerly, careful ligation of the thoracic duct was the only recommended intraoperative management option. Biological glues or adhesive patches have been used to control small leaks alone, and have also been combined with duct ligation.^{1,2,3,4} As an adjunct, local (sternomastoid, scalenus medius and omohyoid) and regional (pectoralis major) muscle flaps may be brought into the area for oversewing.^{5,6,7,8} Microvascular techniques include repairing small tears by carbon dioxide laser welding and lymphatic-venous microanastomosis.^{9,10,11}

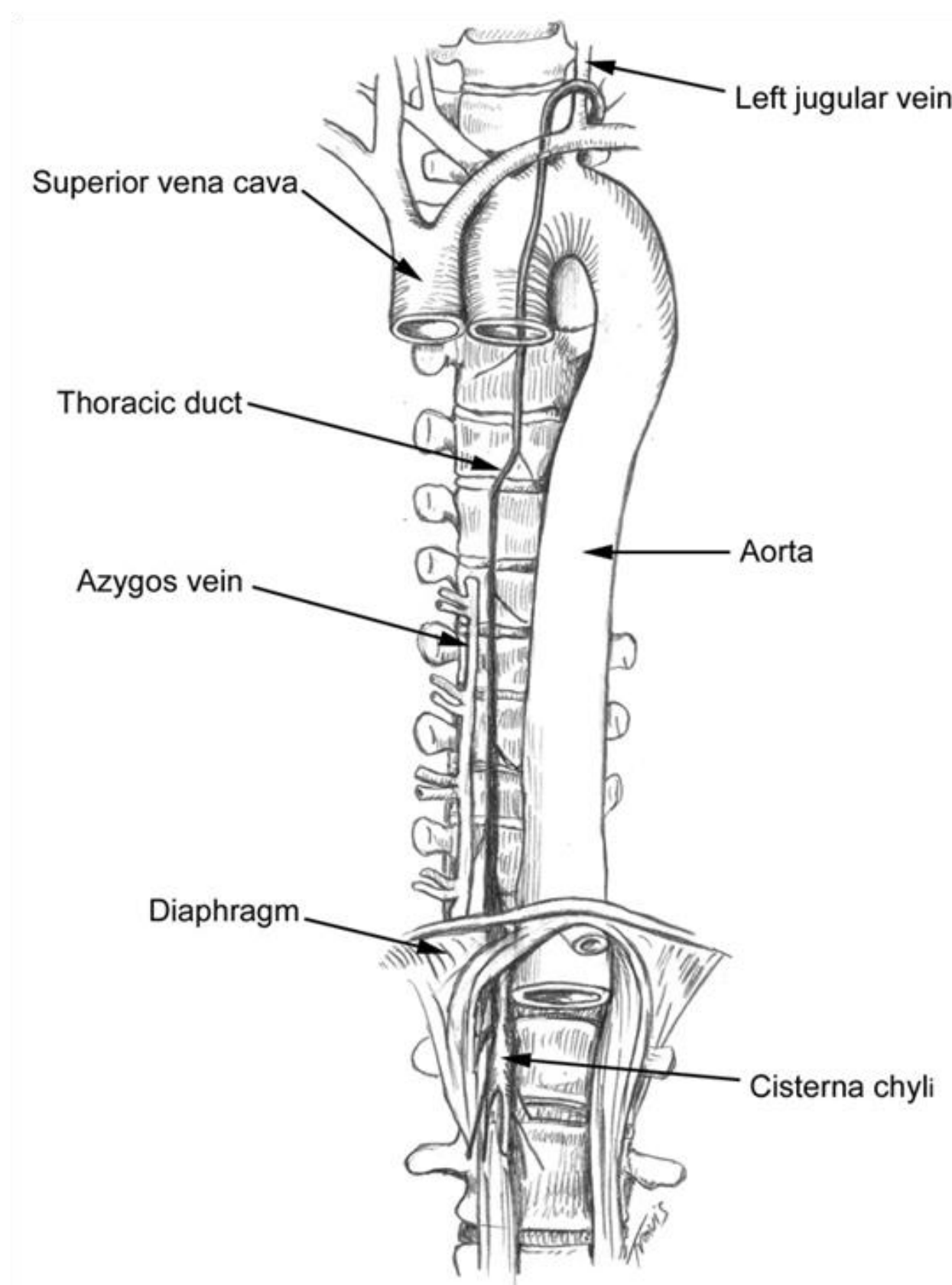


Diagram 1: Anatomical course of thoracic duct

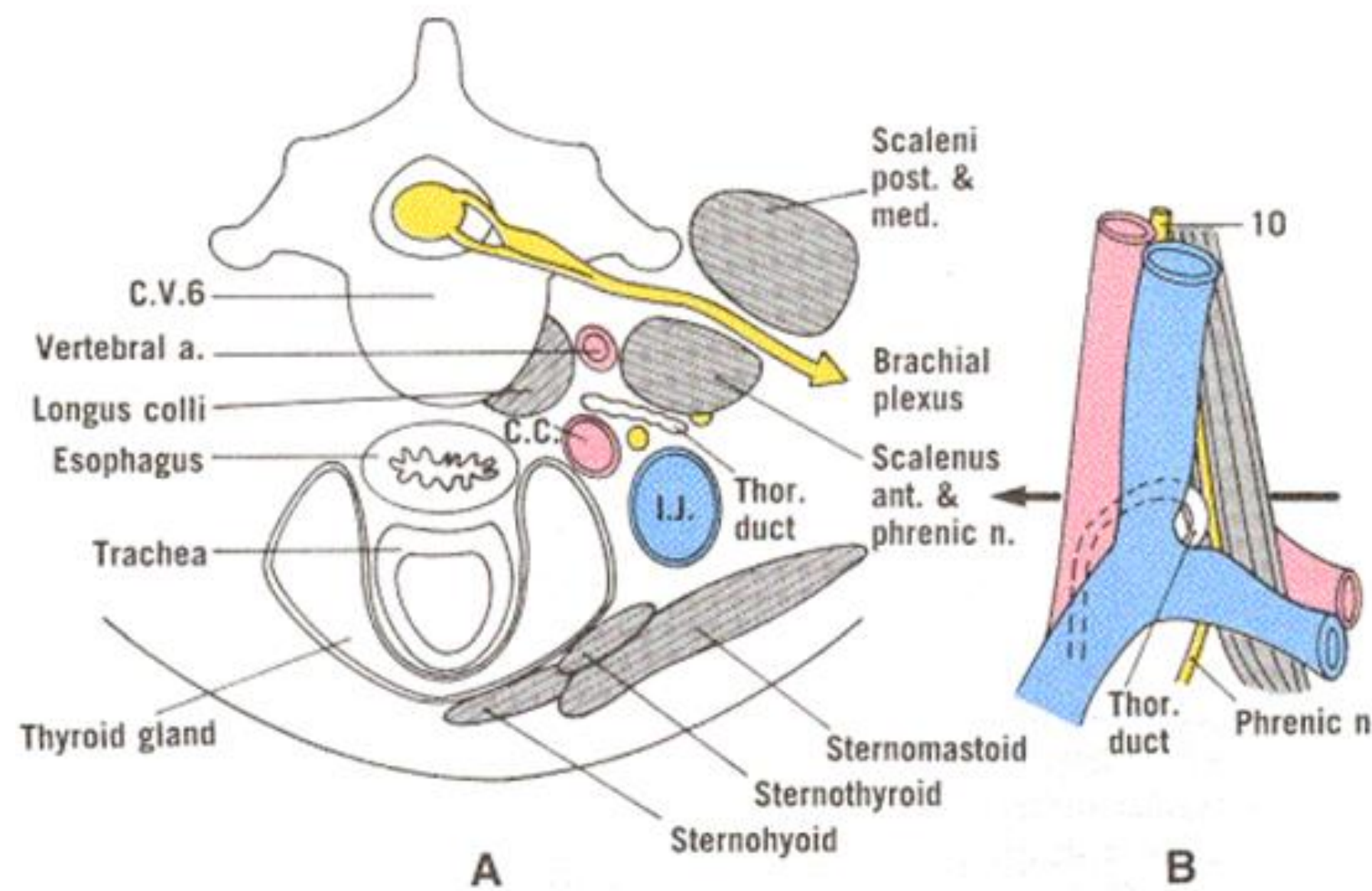


Diagram 2: Anatomical relationship of thoracic duct to surrounding structures

Conclusions:

There is a paucity of peer-reviewed publications to establish an evidence-based guideline on the surgical management of intraoperative thoracic duct injury during lower neck procedures. The lack of a clear consensus on this topic makes this an area open for prospective analysis.

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