

## Anatomy of thoracic duct: A cadaveric study

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Iatrogenic injuries of the thoracic duct may occur during esophagectomy resulting in chylothorax. Therefore, having a comprehensive knowledge of thoracic duct anatomy, its variations are highly beneficial. This study was designed to assess the anatomy of thoracic duct and variations through its course in the thorax. Ten (5; males and 5; females) fresh intact adult cadavers were dissected. Following the initial dissection, all of them were further sectioned sagittal in the midline and separated into the half thoracic cavities and assessed. The study was carried out in the Department of Anatomy, Faculty of medicine, Ragama, Sri Lanka from 2022 to 2024. The ethical clearance was obtained from Ethics Review Committee, Faculty of Medicine University of Kelaniya. Authors declare no conflict of interest. All our specimens, the cisterna chyli was in the retro-crural space at the level of the lower border of the 12<sup>th</sup> thoracic vertebra, in 4/10 it was at the level of L1–2 vertebrae. All were tubular structures located right to the abdominal aorta and variations of the pathway within the thoracic cavity or in its termination were not observed. The total length of the thoracic duct ranged from 39- 44 cm. Its mean transverse diameter was 2.8 mm (range: 2.1–3.8 mm SD: 0.2 mm) at the upper segment, 1.8 mm (range: 1.4–2.1 mm SD: 0.2 mm) at the middle segment, 3.7 mm (range: 3.4–4.5 mm SD: 0.3 mm) at the lower segment. Therefore, the thoracic duct is wider in diameter at its commencement but narrows at the mid-thoracic level and widens again before its termination. The mean maximum transverse diameter and length of the cisterna chyli were 4.2 mm (SD: 0.3mm) and 14.5 mm. Except for common type, variations of cisternal chyli and thoracic duct were not observed in this study. Further analysis with a large sample size is recommended.

**Keywords:** *Cisterna chyli*, Esophagectomy, Mediastinum, Thoracic duct, Thorax

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