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Paper: Diversity

Morphology of the Thyroid Gland and its common variations

The thyroid gland is an endocrine gland located in the anterior triangle of the neck across the midline. Many pathological conditions such as tumours and inflammatory diseases are associated with the thyroid gland. The incidence of thyroid diseases, with or without an indication for surgical intervention is a common occurrence in clinical practice. Hence an in-depth knowledge of the morphology of the thyroid gland and its variation is of paramount importance to clinicians. Literature surveys carried out do not reveal adequate studies relevant to the morphology of the thyroid gland and its variations in a Sri Lankan population.

The aim of the study is to identify the morphology of the thyroid gland and its possible variations in the Sri Lankan population. A descriptive study was carried out by dissecting 31 human cadavers (12 female and 19 male) aged between 35-80 years in the Department of Anatomy, University of Kelaniya. Measurements were taken with Vernier Caliper.

The results show thirty one thyroid glands (62 sides) were observed and measurements were taken. Average length, width and thickness of the right lateral lobes were 4.11cm, 1.25cm and 1.95 respectively. Average length, width and thickness of the left lateral lobes were 4.02cm, 1.13cm and 2.05cm respectively. Pyramidal lobe was found in 12 thyroid glands (38.7%), of which 4 were in females and 8 in males. Of these 12, in 9 glands pyramidal lobe was arising from the left lobe (75%) and the rest from the isthmus(25%). Only 83.33% of pyramidal lobes were associated with levator glandulae thyroidae and the rest were independent. Levator glandulae thyroidae was observed in 10 glands (32.25%). In three glands (9.67%) isthmus was found to be absent. Significant gender difference was not identified in the dimensions of the gland.

No significant difference in dimensions was observed when compared to western figures. Presence of the pyramidal lobe is not an uncommon finding. Therefore, having a sound knowledge in morphology of the thyroid may reduce the unwarranted outcomes in thyroid surgeries in Sri Lanka.