

## **PP 77: Variation in position of isthmus of thyroid and location of parathyroid glands in a Sri Lankan population**

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**Introduction and objectives:** Objective is to determine position of isthmus of thyroid and location of superior (SPGs) and inferior parathyroid glands (IPGs).

**Methods:** 50 fresh normal adult thyroids along with part of trachea were collected from Judicial Medical Office, Colombo South Teaching Hospital. Position of the superior (SBI) and inferior borders of isthmus (IBI) relative to the underlying cartilages (cricoid and tracheal rings) were studied. SPGs and IPGs were identified by the dissecting microscope and their location in relation to the level of these cartilages was noted.

**Results:** Superior border of the isthmus varied, extending up to cricoid cartilage and inferior border extended upto the 4th tracheal ring (TR). In 36 (72%) thyroids, SBI was at 1<sup>st</sup>TR. IBI was at the 2<sup>nd</sup>TR in 36% and at the 3<sup>rd</sup>TR in 36%. Out of the identified SPGs, 26/43 (60%) of the left and 25/35 (71%) of the right were located at the level of 1<sup>st</sup>TR. 15/43 (35%) of the left and 8/35 (23%) of the right SPGs were located at cricoid level. Out of identified IPG, 18/30 (60%) of the left and 25/41 (61%) of right IPGs were located at 3<sup>rd</sup>TR.

**Conclusions:** Although isthmus of thyroid is documented to be related to 2<sup>nd</sup> to 4<sup>th</sup> TR, its position is variable. Our results confirm that majority extend from 1<sup>st</sup> to 3<sup>rd</sup>TR. Majority of the SPGs were located at the 1<sup>st</sup>TR or cricoid level and IPGs at the 3<sup>rd</sup> or 4<sup>th</sup>TR. Knowledge of position of isthmus, parathyroid glands and their variations is helpful for surgeons in identifying the parathyroids and avoiding accidental removal of glands.