

An Incidental Finding of the Thyroidea Ima Artery:-A Case Report Study

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ABSTRACT:

We are here reporting a case of an incidental finding of the thyroidea ima artery emerging from the brachiocephalic trunk with a typical inferior thyroid vessels on both sides emerging from the thyrocervical trunk. The thyroidea ima artery entered the thyroid gland near to anterior surface of right lobe of thyroid gland. It arose from the brachiocephalic artery proximal to its bifurcation.

Key words: - Thyroidea ima artery, Thyroid

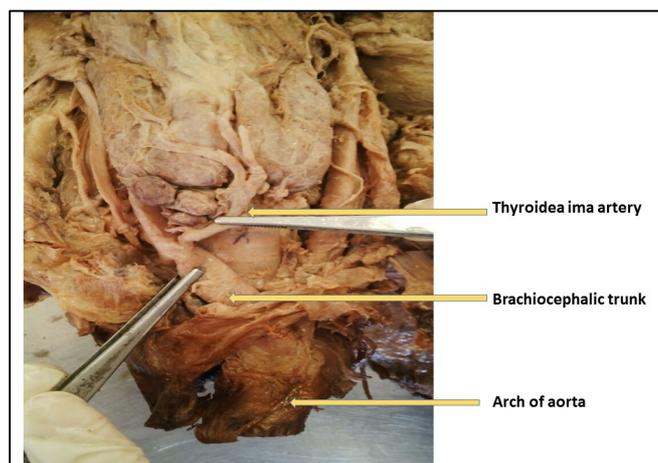
Introduction:

The Thyroidea Ima artery (The artery of Neubauer), was recognized and described by Neubauer in 1786. This artery was described in all anatomical textbooks. Thyroidea ima artery is an important artery supplying thyroid gland. It may also supply the neck viscera and thymus. When present, it emerges from the brachiocephalic trunk, the arch of the aorta or the right common carotid artery. It is present in 3% of cases¹. The knowledge of the anatomy of the thyroidea ima artery is important for neck surgeons^{2,3}.



Observation:

Image 1- Throidea ima artery



In this case the thyroidea ima artery was observed in an embalmed adult female cadaver during a routine supervised gross anatomy class dissection. The neck viscera were exposed according to standard dissection method. A thyroidea

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ima artery was identified and traced to its origin. It arose from with medial surface of the middle of the brachiocephalic artery 12 mm proximal to its bifurcation (Image 1). Then it ran upward and medially up to lower pole of thyroid gland and divided into two branches, one branch entered into isthmus from its right side and second branch ran on anterior surface of right lobe and entered into thyroid gland from lateral side of right lobe of thyroid gland. On both sides, the thyrocervical trunk was identified with its usual three branches.

Discussion:

The thyroidea ima artery was observed in one case out of 20 cadavers dissected in routine anatomy dissection. Its variability and low percentage of occurrence have been emphasized by many reports since it was first described in the eighteenth century.

Anatomical variations in the neck vessels are very high. Venous variations are much higher than arterial. Arteries supplying the thyroid gland include the superior thyroid artery, which emerge from external carotid artery and inferior thyroid artery, emerging from the thyrocervical trunk.

In a small percentage of cases, anomalous arteries to the thyroid occur³. The most important anatomical variation of thyroid arteries is the thyroidea ima artery, present in 1.5% - 12.2% of cases⁴. In majority of cases, it emerges from brachiocephalic trunk, less often from right common carotid artery, aortic arch, internal thoracic artery or left common carotid artery^{5, 6}. In our case, the inferior thyroid artery, which we recognized as normal, had a typical course and relation to surrounding structures, including recurrent laryngeal nerve and parathyroid glands.

Conclusion:

The anomalous thyroidea ima artery present in 3% of subjects². The knowledge of the course of the thyroidea ima artery is important mainly for surgeons, for the proper performance of neck surgery (eg. Removal of the thyroid gland by thyroidectomy or during tracheostomy procedure as elective life saving procedure)^{7, 8}. Atypical branching of vessels can cause intra-operative bleeding and/or postoperative hematoma by damaging of the thyroidea ima artery⁹. Missing the ligation of the thyroidea ima artery may lead to bleeding after operations¹⁰. Midline neck surgery may lead to injury if the surgeons miss the probability of the presence of such a normal arterial variation in the suprasternal region^{7, 11, 12} and may find thyroid artery emerging from brachiocephalic trunk with bilateral missing inferior thyroid artery¹³.

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