

*Case Report***Variant Origin of Thyro Linguo Facial Trunk from Left Common Carotid Artery- A Case Report**Raju Sugavasi^{*@}, Sujatha M^{*}, Indira Devi B^{*}, Sirisha B^{*}, Kanchana Latha^{**}^{*}Tutor, ^{**}Professor & HOD

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[@]Correspondence Email: anatraju@yahoo.co.in*Received: 19/03/2012**Revised: 23/04/2012**Accepted: 25/04/2012***ABSTRACT**

Common carotid artery is a branch of brachiocephalic trunk on the right side and arch of aorta on the left side. It bifurcates into external and internal carotid arteries at upper border of thyroid cartilage. Variations in the bifurcation of the common carotid artery and the origin or branching pattern of the external carotid artery are reported. Here we report a case of variant origin of thyro linguo facial trunk from left common carotid artery. The anatomical knowledge of the variations of the common carotid artery such as its branching pattern is essential to avoid complications with catheter insertion in various surgical procedures at neck region.

Key Words: Common carotid artery, External carotid artery, Thyro linguo facial trunk.

INTRODUCTION

The common carotid artery (CCA), internal carotid artery (ICA) and External carotid arteries (ECA) are provides the major source of blood to the head and neck region.

On right side the common carotid artery arises from the brachiocephalic trunk, on left side it arises directly from the arch of aorta. The CCA bifurcates into an internal carotid artery and an external carotid artery at upper border of thyroid cartilage level with the inter vertebral disc between the C3

and C4 cervical vertebra in the carotid triangle. The external carotid artery runs antero medial to the internal carotid artery at its origin then becomes anterior and lateral as it ascends. the external carotid artery has eight named branches, superior thyroid, lingual, facial arteries arises from its anterior surface, the occipital and posterior auricular arteries arises from its posterior surface, ascending pharyngeal artery arises from medial surface and the maxillary, superficial temporal arteries are its terminal branches arises within the parotid gland. ^[1]

CASE REPORT

During the routine dissection of under graduate medical students in the Department of Anatomy we have noticed a higher division of common carotid artery and the thyro linguo facial trunk arising from the left common carotid artery in a male cadaver aged about 55 years (Fig.01).

In the present case common carotid artery (CCA) divided into external and internal carotid arteries at the level of hyoid bone as a higher bifurcation. The superior thyroid artery, lingual artery, facial artery originated as a common trunk from the common carotid artery just below the level of its bifurcation. The common trunk first ran forwards and medially then divided into superior thyroid artery (STA) and facio lingual trunk. Linguo facial trunk ran forwards then divided into lingual and facial arteries. The lingual artery ascends vertically up crossed the internal laryngeal nerve, taking an oblique course it passed underneath the hypoglossal nerve and anterior belly of digastric muscle to enter digastric triangle. The facial artery passed upwards and forwards and reached posterior part of sub mandibular gland. Occipital artery and ascending pharyngeal artery originated normal level from external carotid artery. This variation was seen on left side as unilaterally and other side was normal.

DISCUSSION

The incidence of bifurcation of common carotid arteries at various levels were reported by some authors, According to Huber (1982) ^[2] the bifurcation at C4 to C5 in 48% and at C3 to C4 in 34% of 658 bifurcations. Thwin S S (2010) ^[3] reported a case of high bifurcation of CCA bilaterally, on right side at 2nd cervical vertebral level and 3rd cervical vertebral level on left side.

Anu VR et al (2007) ^[4] reported the higher and lower division of common carotid artery.

There are reports of origin of Thyrolingual trunks from common carotid artery, According to Williams et al (1995) ^[5] the superior thyroid, vertebral and inferior thyroid arteries arising from common carotid arteries. Babu B P (2001) ^[6] reported a case of Thyrolingual trunk arising from the right common carotid artery. Chitra R (2008) ^[7] reported a case of Trifurcation of right common carotid artery.

Variations in the branching pattern of the external carotid artery have been reported earlier by several authors, Zumre o et al (2005) ^[8] observed a linguo-facial trunk in 20% of the cases, a thyro-lingual trunk in 2.5%, a thyro linguo- facial trunk in 2.5%, and an occipito-auricular trunk in 12.5% of the cases in the human fetuses studied by them. Gluncic V et al (2001) ^[9] have observed the superior thyroid, lingual and occipital arteries branched directly from the right external carotid artery at its origin. According Anil A (2000) ^[10] the lingual artery arises from a common trunk with the facial as a linguo facial trunk in 10–20% of cases.

Anatomical knowledge of variations in the branching pattern of the carotid system will be useful in angiographic studies and in surgical procedures of the head and neck region.

CONCLUSION

The knowledge of the variations regarding the origin, branching pattern of carotid arterial system is important because lack of that knowledge of variations could lead to serious complications if one blood vessel is mistaken for another. The chief blood vessel to the brain is internal carotid artery, Carotid endarterectomy is the main treatment for atherosclerotic plaques of the

cervical internal carotid artery so experience of that variations one can avoid postoperative complications. This article reviews the clinical importance and occurrence of thyrolinguofacial trunk from left common carotid artery.

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FIGURES & LEGENDS

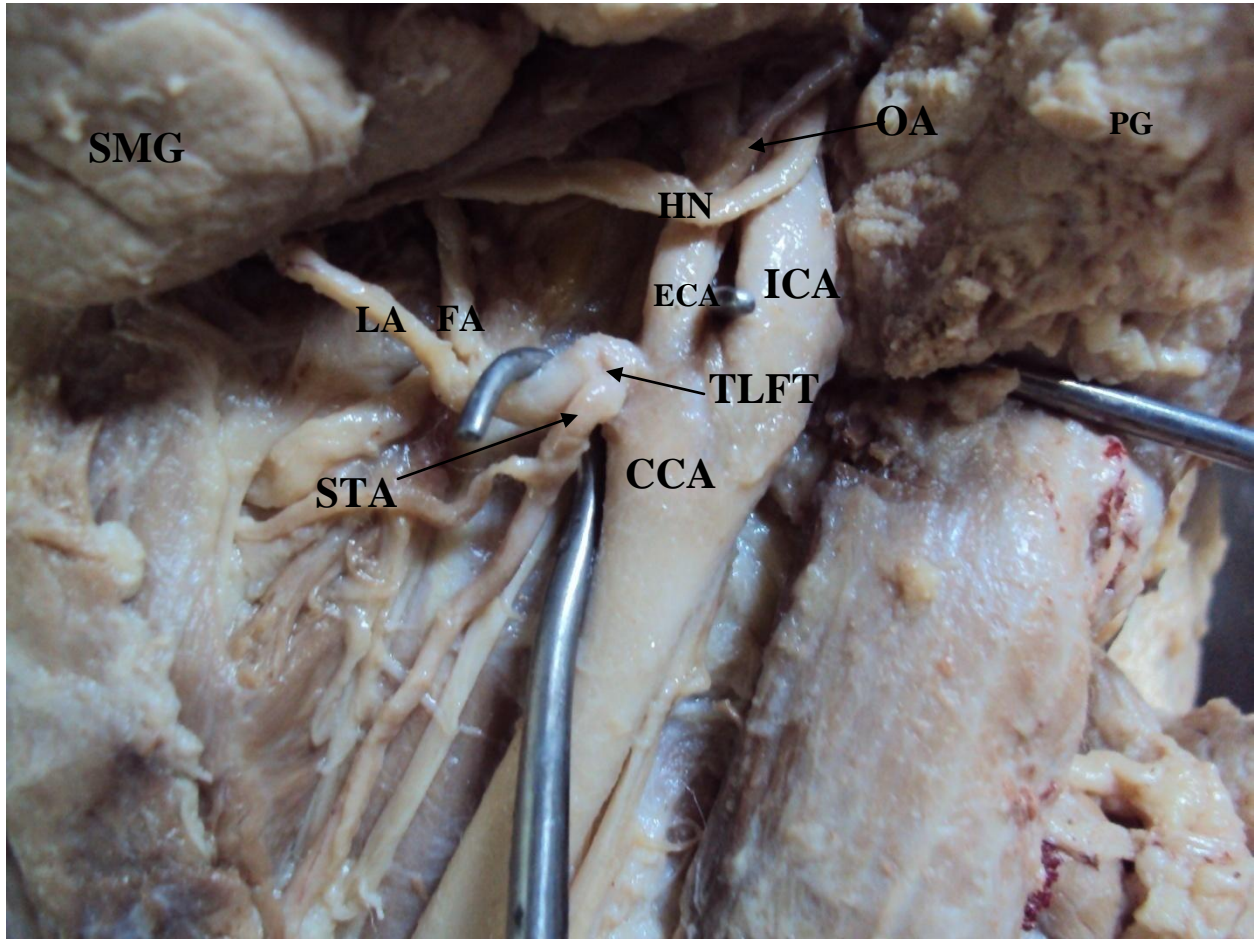


Figure.01: figure showing variant thyro linguo facial trunk arising from the left common carotid artery (CCA: common carotid artery, ICA: Internal carotid artery, ECA: external carotid artery, STA: Superior thyroid artery, LA: lingual artery, FA: facial artery, OA: Occipital artery, HN: Hypoglossal nerve, SMG: sub mandibular gland, PG: parotid gland).
