

VARIANT ORIGIN OF LINGUOFACIAL TRUNK

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ABSTRACT

External carotid artery is a vascular system constituting the nourishment to the territorial region of head and neck. In the present report the linguofacial trunk arose from single point and ran forwards and medially and then divided into lingual and facial branches in two cadavers. Accurate anatomical knowledge of the vessels of face and neck and their variation in the branching pattern has immense surgical importance and adds great value to the precise diagnosis in radiology.

Keywords: facial artery, lingual artery, linguofacial trunk

INTRODUCTION

External carotid artery is a vascular system constituting the nourishment to the territorial region of head and neck. Accurate anatomical knowledge of the vessels of face and neck and their variation in the branching pattern has immense surgical importance and adds great value to the precise diagnosis in radiology. Arterial differentiation occurs centripetally from arterial network therefore common origins occur. Lingual arteries and the arteries of facial region are often used as recipient vessels in microvascular surgery. Anatomical understanding of facial artery is important in many types of facial surgery . Knowledge of the course of lingual artery is not only a guide for catheterization during the process of superselective chemotherapy (Tatsuhiko Nakasato^a et al 2000¹ but also during hemiglossectomies in malignant tumours of tongue (Arnold komisar 1986^2).

Observations:

Anatomical variations of the vessels of the neck region were carried out on 20 cadavers (18 male and 02 female during the years 2006-2010). Our results briefly are as follows:

- (1) The noncommon-trunk type of the external carotid artery (in which each branch arises separately from the external carotid artery) was found in 17 cases,
- (2) truncus linguofacialis type was found in 2, and
- (3) truncus thyrolinguo-facial type was found in 1 case .

The lingual artery and facial artery usually take origin separately from external carotid artery. In the present report the linguofacial trunk arose from single point and ran forwards and medially and then divided into lingual and facial branches in two cadavers(fig.1, fig.2) . The lingual artery passed horizontally and disappeared underneath the hyoglossus muscle.





Fig.1-common origin of linguofacial trunk fig.2- common origin of linguofacial trunk FA-Facial Artery, LA-Lingual Artery

LFT-Linguofacial Trunk

Ethical clearance has not been taken as these cadavers are used by the students for their regular dissection purpose.

DISCUSSION

Embryology:

The ventral aorta proximal to the third arch has become the common carotid artery. It divides into ventral pharyngeal artery and internal carotid artery (future external carotid artery). The distal part of ventral pharyngeal and ventral remnants of first and second aortic arches will develop into linguofacial system.

Basmajian 1993³, Shangkuan et al. 1998⁴, Shima et a,l. 1998⁵ observed the presence of the linguofacial trunk in two hundred and eleven cases, 20% showed the trunk; Shangkuan et al⁴ observed that in twentyfive cases, 20% showed the trunk and Shima et al., ⁵ described that in thirty cases, 21.7% showed the trunk.

Linns et al 2005⁶ during dissections in corpses in the anterior trigone region of the neck, observed the presence of the linguofacial trunk in their survey have

obtained results similar to that of above authors .

Shima, Harunobu D.D.S et al 1998⁷ in their study of Anatomy of Microvascular Anastomosis in the Neck found truncus linguofacialis in 21.7 percent cases. In the present study linguofacial trunk is observed in 10% of cases. The difference in percentage is may be due to study in less number of cadavers.

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Figure legends

1.Fig.1-common origin of linguofacial trunk in cadaver 1

2.Fig.2- common origin of linguofacial trunk in cadaver 2

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