

Case Report

Origin of Thyrolingual Trunk from the Common Carotid Artery

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ABSTRACT

Common carotid artery (CCA) usually does not have any branches in the neck and divides into internal and external carotid artery. Superior thyroid and lingual artery (commonly called as thyro lingual trunk) are the branches of external carotid artery. We report a case of rare origin of thyrolingual trunk from the CCA in a case of ruptured intracranial aneurysm.

KEYWORDS: Carotid branches, common carotid, thyrolingual trunk

INTRODUCTION

Common carotid artery (CCA) originates from the brachiocephalic trunk on the right side and as direct branch of the arch of aorta on the left side. Usually, CCA does not give any branch in the neck. However, anatomical variation in the bifurcation and branching is known and documented by various authors.^[1] Rarely, the CCA is absent and both external and internal carotid artery may have separate origins.^[2] In this case, we report a rare case of thyrolingual trunk originating from the CCA incidentally detected in a patient with ruptured posterior communicating (P.com) artery aneurysm.

CASE REPORT

A 45-year-old male presented to the emergency department with sudden-onset headache and vomiting 5 days back. His computed tomography scan of head revealed diffuse subarachnoid hemorrhage. His cerebral digital subtraction angiography (DSA) was then performed, which revealed a multilobed P.com artery aneurysm which was then successfully coiled and the patient was later discharged with the modified Rankin score of 0. His DSA also revealed an incidental rare finding of common origin of superior thyroid and lingual artery from the CCA which are normally the branch of external carotid artery [Figures 1 and 2].

DISCUSSION

CCA originates from the brachiocephalic artery on the right side and from CCA on the left side. Usually, the CCA and internal carotid artery do not give any

branches in the neck while external carotid artery gives eight branches in the neck. Rarely, thyroid ima artery may originate before the bifurcation.

Common origin of facial and lingual artery from external carotid artery is known as faciolingual trunk. Origin of thyrolingual trunk from external carotid artery has been reported with an incidence of 0.7%–3%.^[3] In the present case, the origin of thyrolingual trunk is from the CCA, approximately 11 mm proximal to the bifurcation which is even rarer [Figures 1 and 2].



Figure 1: Oblique early arterial digital subtraction angiography of the right common carotid artery showing origin of thyrolingual trunk 11 mm proximal to common carotid artery bifurcation

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Figure 2: Oblique digital subtraction angiography arterial phase showing the origin and distribution of thyrolingual trunk from the common carotid artery

Lippert *et al.* reported that the incidence of thyrolingual trunk arising from CCA was <0.1%.^[4]

In 2013, Kapre *et al.* from India reported two cases of thyrolingual trunk, of them one was arising from CCA, 17 mm below the bifurcation, and the other was arising from the carotid bifurcation.^[5] Lemaire *et al.* reported a case of thyrolingual trunk arising from the right CCA, 30 mm below the carotid bifurcation.^[6]

Although the finding of proximal origin of the thyrolingual trunk from CCA was incidental in this case, variation in the branching pattern of the carotid arteries is important for the head and neck surgeons. It is important to identify branches originating from the CCA during neck exploration and avoiding the mix up with external carotid artery. Knowledge of anatomical variation is equally important during neuroangiographic procedures and embolization of head and neck tumors through branches of external carotid artery.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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