ANOMALOUS BRANCH OF THE RIGHT COMMON CAROTID ARTERY

Fernando Oliveira de Menezes[1], Zeferino Demartini Jr[2], Luiz Afonso Dias Matos[3], José Maria Pereira de Godoy[4], Antonio Ronaldo Spotti[5], Marcio Luiz Tostes dos Santos[6]

The right common carotid artery (CCA) originates from the brachiocephalic trunk. It follows ascending passage for the lateral region of the neck, deep to the sternocleidomastoid, sternohyoid, and sternothyroid muscles. The right CCA follows until near the upper border to the thyroid cartilage in the transverse process of the 4th thoracic vertebra, where divides into an internal and an external carotid artery. The common carotid does not emit ramification and keeps its constant bore, approximately 8 mm, since the origin until the bifurcation, where it is dilated and divided[1]. The inferior thyroid artery (ITA) arises from the subclavian artery (troncotireocervical), divides in a medial branch and a lateral that anastomoses with the superior thyroid artery[2-3]. This branch supplies the isthmus and inferior pole of the thyroid gland[4].

We report a case of a patient with ITA as an anomalous branch of common carotid artery.

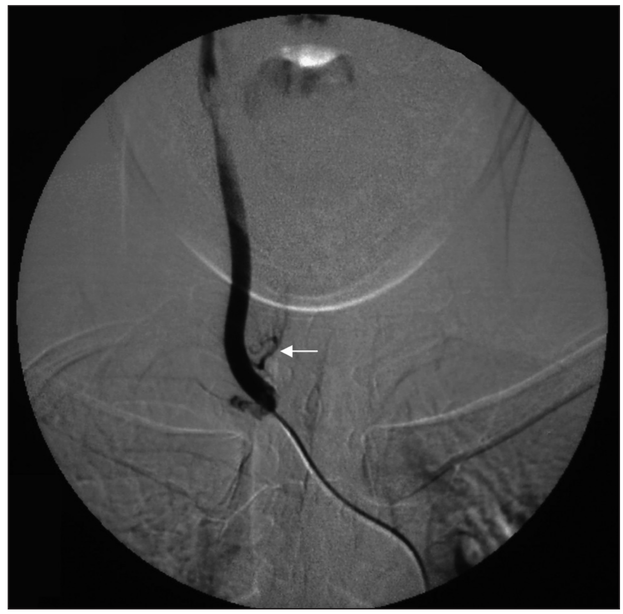

Figure. Angiography of the right common carotid artery in anteroposterior view showing anomalous origin of the inferior thyroid artery.

CASE

A 44-year-old woman, with left cerebellar ischemic stroke, preceded by ipsilateral cervical pain. Magnetic resonance imaging (MRI) showed ischemic lesion and vertebral dissection was suspected. Digital subtraction angiography did not confirm change in the right vertebral artery, but it has revealed an anomalous branch of the CCA compatible with the inferior thyroid artery (Figure). The patient had a good recovery and is currently asymptomatic.

DISCUSSION

Though rare, anomalous branches arising from the common carotid artery have been described, including the superior and inferior thyroid arteries, lingual, ascending pharyngeal, bronchial, facial artery and others. The literature reports anomalies of the common carotid artery but without their anatomical characteristics[5].

Lemaire et al.[6] reported a case of anomalous origin of the superior thyroid and lingual arteries originating from the common carotid artery through a common core. Kaneko et al.[7] presented a case of superior thyroid, lingual and facial arteries arising from the common carotid as well as a common trunk that originates the auricular, maxillary, and superficial temporal arteries.

Matsumoto et al.[8] report a case of the common carotid artery dividing in a more elevated position than the

RAMO ANÔMALO DA ARTÉRIA CARÓTIDA COMUM DIREITA

Unidade de Neurocirurgia Endovascular do Serviço de Neurocirurgia do Hospital de Base de São José do Rio Preto, São José do Rio Preto SP, Brasil: [1]Medical student at Faculdade UNIRG, Gurupi, TO, Brazil; [2]MD, Neurosurgeon, fellow of Unit of Endovascular Neurosurgery at Hospital de Base de São José do Rio Preto SP, Brazil; [3]MD, Neurosurgeon of Unit of Endovascular Neurosurgery at Hospital de Base de São José do Rio Preto SP, Brazil; [4]MD, PhD, Professor of the Department of Cardiology and Cardiovascular Surgery at Faculdade de Medicina de São José do Rio Preto SP, Brazil; [5]MD, PhD, Head of the Department of Neurological Sciences at Faculdade de Medicina de São José do Rio Preto SP, Brazil; [6]MD, Head of the Unit of Endovascular Neurosurgery at Hospital de Base de São José do Rio Preto SP, Brazil.

Received 6 June 2008. Accepted 13 September 2008.

Dr. Marcio Luiz Tostes dos Santos – Hospital de Base / Unidade de Neurocirurgia Endovascular - Avenida Brigadeiro Faria Lima 5544 - 15090-000 São José do Rio Preto SP - Brasil. E-mail: neurocirurgiaendovascular@yahoo.com.br

usual, forming anomalous branches as the lingual artery to the level of the inferior edge of the third cervical vertebra, superior thyroid in the region of the 4^{th} cervical vertebra, and facial, originating a distance of 3 mm from the origin of the lingual artery.

In conclusion, we have reported a patient with anomalous branch of common carotid artery. This finding, detected by cerebral angiography, is rare and incidental.

ACKNOWLEDGMENTS – We would like to thank Eliane dos Santos Soeiro e Patrícia Kelley de Freitas for valuable technical assistance.

REFERENCES

1. Babu BP. Anomalous origin of thyrolingual trunk from right common carotid artery: a case report. J Anat Soc India 2001;50:47-48.
2. Xiao H, Zhuang W, Wang S, et al. Arterial embolization: a novel approach to thyroid ablative therapy for Graves' disease. J Clin Endocrinol Metab 2002;87:3583-3589.
3. D'avila JS, Sennes JU, Tsuji DH. Study on the microvascularization of the human vocal cord with cyst and contralateral nodule reaction by rigid laringeal endoscopy. Rev Bras Otorrinolaringol 2003;69(2):166-173.
4. Osborne AG. The internal carotid artery. In Osborne AG (ed). Diagnostic cerebral angiography, 2.Ed. Philadelphia: Lippincott Williams & Wilkins, 1999:31-55.
5. Simic P, Borovecki F, Jelic M, Jelic M, Vinter I. Anomalous branch of the left common carotid artery. Clin Anat 2004;17:409-412.
6. Lemaire V, Jacquemin G, Medot M, Fissette J. Thyrolingual trunk arising from the common carotid artery: a case report. Surg Radiol Anat 2001;23:135-137.
7. Kaneko K, Akita M, Murata E, Imai M, Sowa K. Unilateral anomalous left common carotid artery: a case report. Ann Anat 1996;178:477-480.
8. Matsumoto M, Okuda H, Ishidoh E, Mitsui H. An anomalous case of the common carotid artery giving off several branches and high division of the internal carotid artery. Okajimas Folia Anat Jpn 1986;63:37-43.