

# Variation in Clavicular Origin of Sternocleidomastoid Muscle

## Variación en el Origen Clavicular del Músculo Esternocleidomastoideo

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**SUMMARY:** The sternocleidomastoid is a muscle with a great extension that occupies the cervical region and is extended obliquely from the head to the trunk. Its morphology is not uniform, once its ends are wide and slim while its medial edge is thick and narrow. The aim of our work was to relate a case of variation in clavicular origin of this muscle that was extended beyond the half of clavicle laterally, in both sides of the neck.

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**KEY WORDS:** Sternocleidomastoid muscle; Anatomical variation.

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### INTRODUCTION

The region of the neck is considered one of the more complex areas of human body, due to the fact of being related to some important structures. This way the professional must have an enhanced knowledge about these structures. In order to perform an approach the sternocleidomastoid muscle is an anatomic referential, because it divides the neck in trigones, facilitating the clinical and surgical procedures.

It is located in the anterolateral region of the neck, under the skin. It has two heads: one fixed in the external manubrium and the clavicular portion in the superior face of medial third of clavicle, and its insertion is in temporal mastoid process extended up to the superior nuchal line of occipital bone. Thus it is an important muscular point of reference (Moore & Dalley, 2007).

Due to its obliquity, the sternocleidomastoid muscle realizes the movements of flexion, rotation and inclination of the head, and it is considered an important accessory muscle of inspiration (Kendall, 1995).

Its nervous supply is attributed to the cranial accessory nerve (XI), which in general passes through the muscle; as well as by ventral branches of the second, the third and sometimes the fourth spinal nerves (Machado, 1992). Its blood supply comes from the arteries: superior thyroid, occipital artery

and posterior auricular artery which are branches of external carotid artery; and is also irrigated by the suprascapular artery, a branch of subclavian artery (Gray, 1977).

### RELATE OF A CASE

During the routine dissections of the graduation course of medicine of the Federal University of Pernambuco, Recife-PE, Brazil; in the region of the neck of a male adult corpse, we found a rare case of variation of sternocleidomastoid muscle. This variation was characterized in the clavicular origin by an additional portion which was laterally expanded (Fig. 1).

### DISCUSSION

The knowledge of anatomical variations is very important for the professionals of medical area because when these workers face rare clinical cases the diagnosis and treatment become more difficult, demanding a large clinical experience of these professionals to deal with these situations.

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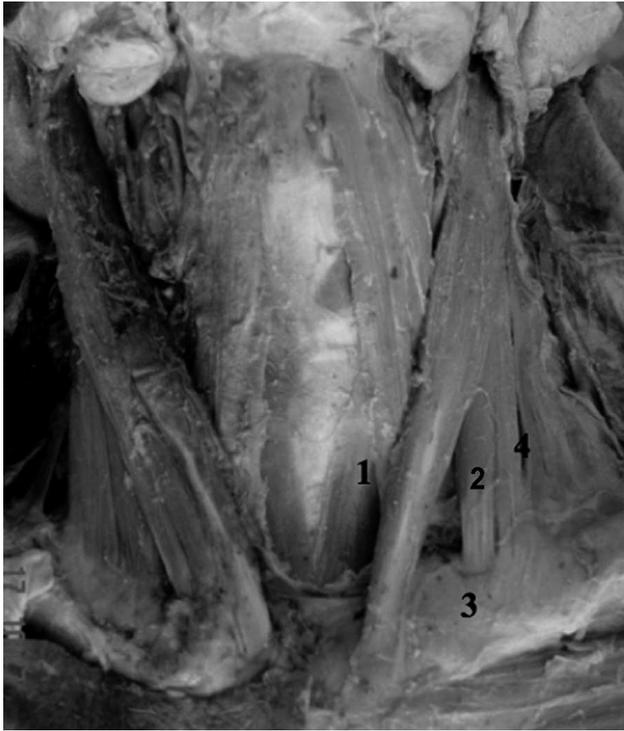


Fig. 1. Variation of the sternocleidomastoid muscle. 1. Sternal origin; 2. Clavicular origin; 3. Clavicle; 4. Anatomical variation.

The sternocleidomastoid muscle shows a great variation in the extension of the origin of clavicle: in some cases the clavicular head can be as narrow as the sternal; in other cases it can have about 7.5 cm of width. When the clavicular origin is wide, it is occasionally subdivided in various issues; separated by narrow intervals. The adjacent edges of sternocleidomastoid and trapezius muscles are rarely found in contact (Gray).

According to Testut & Latarjet (1975) this muscle can show an inferior aponeurotic insertion, it can also, by its posterior edge, join the trapezius muscle, as well as be divided in issues: sternomastoid, sternooccipital, cleidomastoid and cleidooccipital. According to Ramesh *et al.* (2007) the additional clavicular heads are narrow and separated by a wide triangular interval, which corresponds to a surface depression, the lesser supraclavicular fossa. In accordance with them, Dufour (2004) affirmed that these four heads can be distributed in two plans: one superficial and another deep. Our data are different from the ones found in the literature, once the additional portion found is widely extended laterally without divisions.

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**RESUMEN:** El esternocleidomastóideo es un músculo de gran extensión en la región cervical con trayecto oblicuo desde la cabeza hasta el tronco. Su morfología no es uniforme, debido a que sus extremos son anchos y finos, mientras que él es grueso y estrecho en su borde medial. El objetivo de este trabajo fue relatar un caso de la variación en el origen clavicular de este músculo que se extendió mas allá de la mitad de la clavícula en dirección lateral, en ambos lados del cuello.

**PALABRAS CLAVE:** Músculo esternocleidomastoideo; Variación anatómica.

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