



global.anato.cl  
CODE: 3Hgce00001

# A rare muscle anomaly: The Supraclavicularis Proprius Muscle

Authors: Nicolás Ernesto Ottone\* & Carlos Medan.

E-mail: \*[nicolasottone@gmail.com](mailto:nicolasottone@gmail.com)

Institution: Dissection Team (Dr VH Bertone), Second Chair of Anatomy, School of Medicine, University of Buenos Aires, Buenos Aires, Argentina.

Year: 2009

Language: English

# A rare muscle anomaly: The Supraclavicularis Proprius Muscle

Paper published by Folia Morphologica (2009, Vol. 68, No. 1, pp. 55-57)

[Received 17 September 2008; Accepted 15 November 2008]

(Presented at 45th Argentinian Congress of Anatomy – Mendoza 2008 )

- The supraclavicularis proprius muscle is an abnormal muscle that may be found in the supraclavicularis fossa.
- During routine dissection of 78 cadavers (corresponding to 156 supraclavicular fossae), 10% formalin fixed, we found it in one adult Caucasian male cadaver. In our experience, the frequency of occurrence of the supraclavicularis proprius muscle would be 0.64%.
- This abnormal muscle consists of an anterior tendon inserting into the sternal aspect of the clavicle, lateral to the clavicular insertion of the sternocleidomastoideus muscle, and a posterior muscular portion entering the lateral aspect of the clavicle, medial to the acromioclavicular joint.

# A rare muscle anomaly: The Supraclavicularis Proprius Muscle

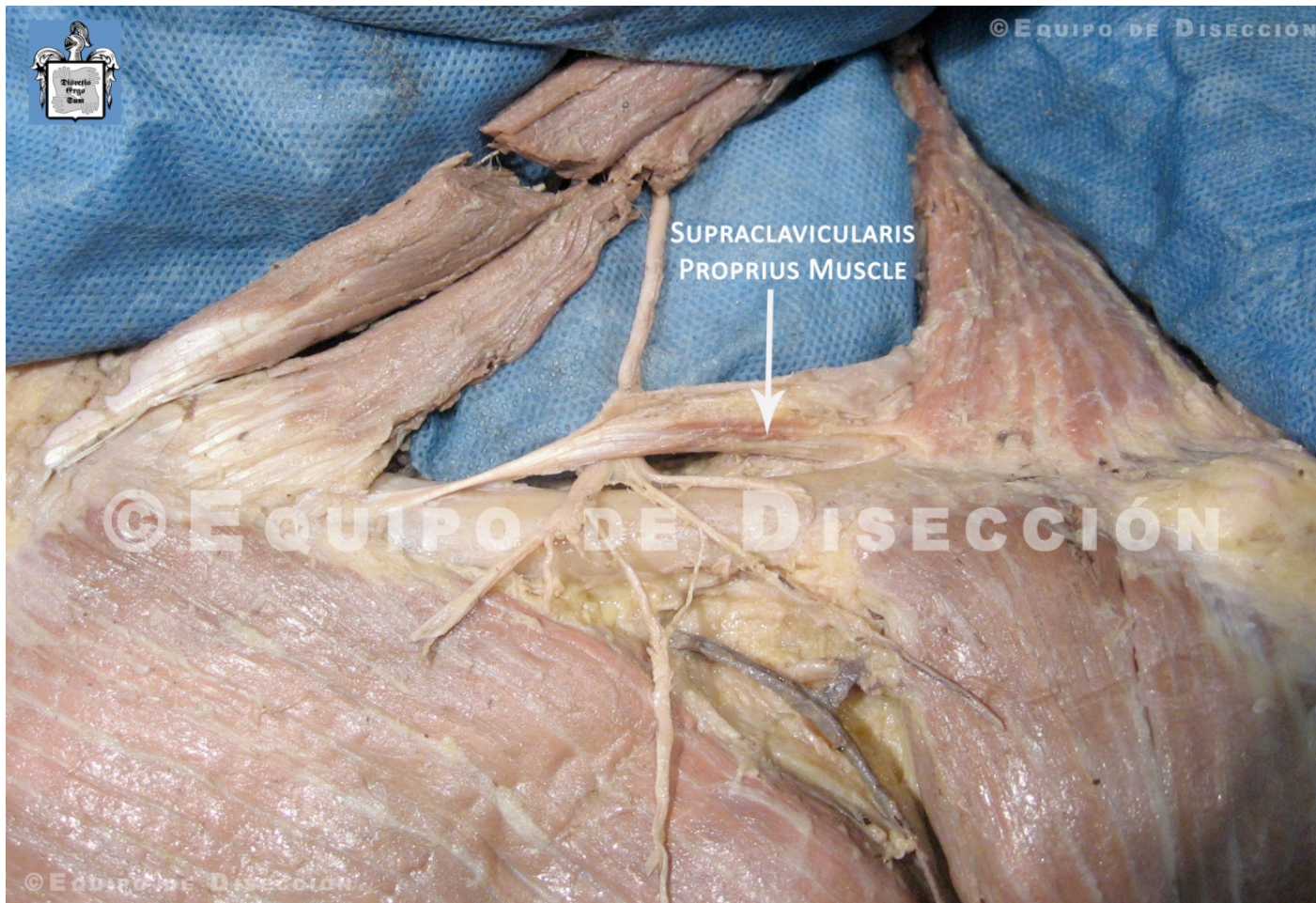
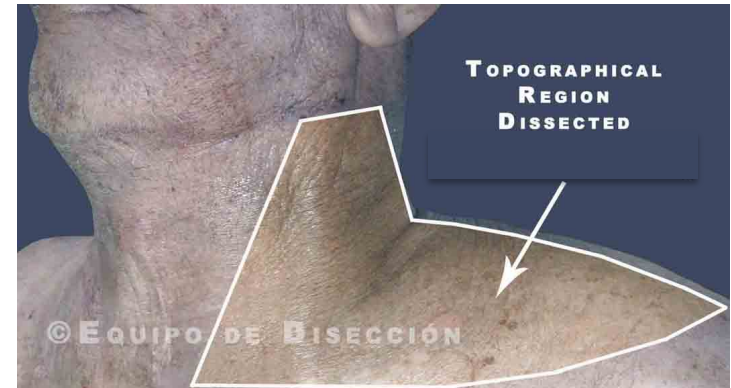
Paper published by *Folia Morphologica* (2009, Vol. 68, No. 1, pp. 55-57)

[Received 17 September 2008; Accepted 15 November 2008]

(Presented at 45th Argentinian Congress of Anatomy – Mendoza 2008 )

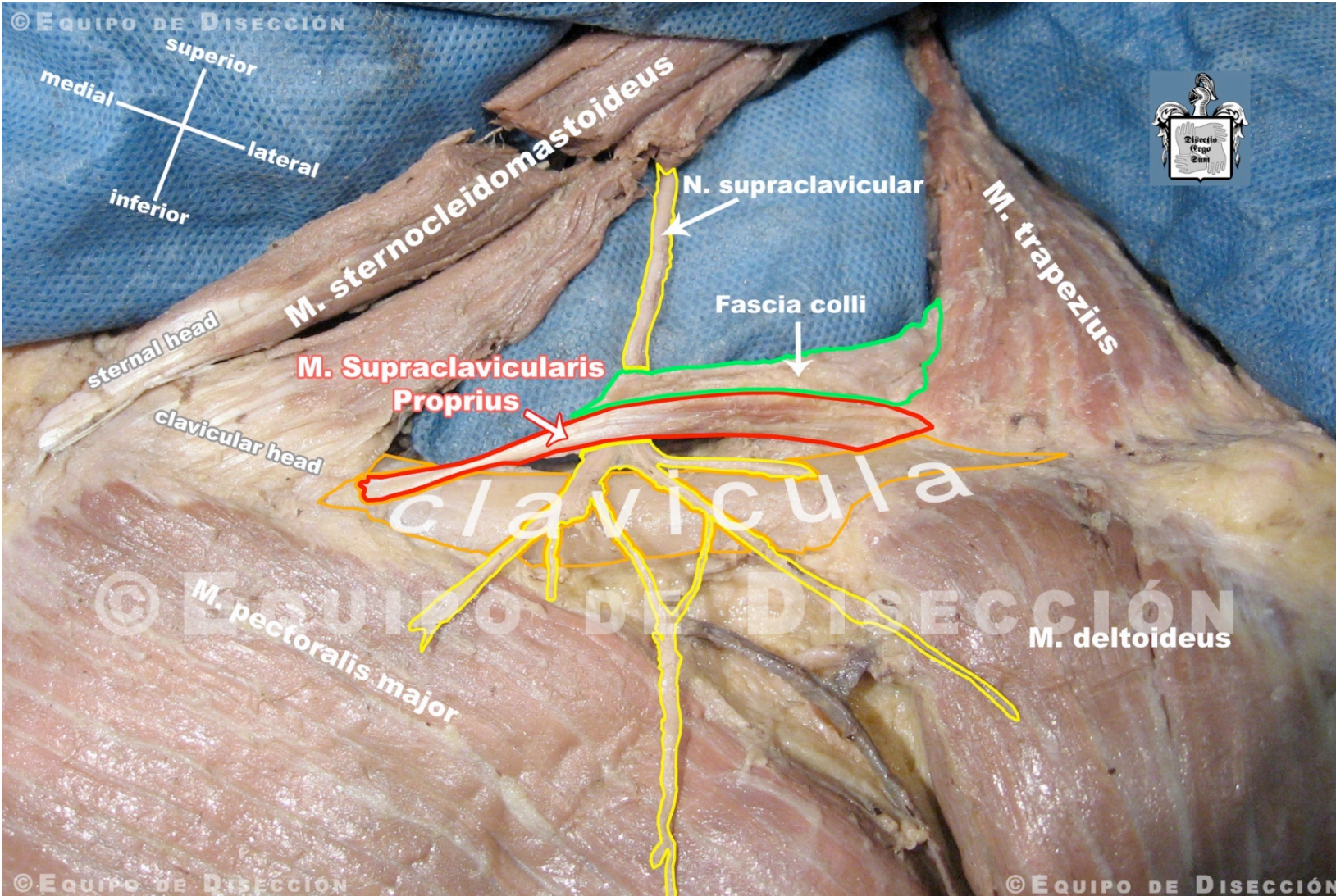
- This anatomic variant was first described by Gruber (1865) [9], who called it the *tensor fascia colli*, on account of his finding that its contraction made tense the superficial layer of the cervical fascia that contained it. Since then a few authors have described this abnormal muscle: Macalister (1875) [19], Bardeleben (1876) [1], Knott (1880) [16], Dubar (1880) [6], Le Double (1897) [18], Laidlaw (1902) [17], Eisler (1912) [7], and Stadler (1930) [24]. However, none of them provided any information on its frequency of occurrence.
- With respect to its embryological origin, Mori [21] indicates that the trapezius and sternocleidomastoideus muscles develop from the branchial musculature, so it is presumed that the supraclavicularis proprius muscle evolved from the sternocleidomastoideus and trapezius muscles, of which it represents an abnormal persistence.
- The supraclavicular nerve passed underneath this abnormal muscle through the space it formed with the clavicle. When in action, the muscle may compress the supraclavicular nerve against the clavicle, which would be a potential cause of supraclavicular nerve entrapment syndrome, causing shoulder pain.

# A rare muscle anomaly: The Supraclavicularis Proprius Muscle





# A rare muscle anomaly: The Supraclavicularis Proprius Muscle



# A rare muscle anomaly: The Supraclavicularis Proprius Muscle

## REFERENCES

1. Bardeleben von K (1876) Der Musculus "sternalis". Zeitschrift für Anatomie und Entwicklungsgeschichte 1:424-458. Cited by Testut L (1884) Les Anomalies Musculaires chez l'homme. Expliquées par l'anatomie comparée. Leur Importance en Anthropologie. Paris: Masson. 58-59p.
2. Bergman RA, Afifi AK, Miyauchi R (2006) Illustrated Encyclopedia of Human Anatomic Variation. Opera. [URL: http://www.anatomyatlases.org/AnatomicVariants/AnatomyHP.shtml](http://www.anatomyatlases.org/AnatomicVariants/AnatomyHP.shtml) [accessed July 2008].
3. Bryce TH (1899) Note on a Group of Varieties of the Pectoral Sheet of Muscle. J Anat Physiol 34:75-78.
4. Cruveilhier J (1867) Traité d'Anatomie descriptive. 7e partie: Neurologie. Paris: P.Asselin. p 596.
5. de la Caffinière JY, Konsbruck R (1979) Abnormal transclavicular course of a branch of the supraclavicular nerve (foramen nervi supraclavicularis) (one case). Chir Pediatr 20(5):379-81.
6. Dubar (1880) Bulletin de la Socite' Anatomique de Paris, v. 388. Cited by Laidlaw PP (1902) A Supraclavicularis Proprius (Gruber). J Anat Physiol 36:417. And Testut L. (1884) Les Anomalies Musculaires chez l'homme. Expliquées par l'anatomie comparée. Leur Importance en Anthropologie. Paris: Masson. 58-59 p.
7. Eisler P (1912) Die Muskeln des Stammes. Handbuch der Anatomie des Menschen. Band 2, Bänder, Gelenke und Muskeln. Jena: Fischer. 243-257p.
8. Gelberman RH, Verdeck WN, Brodhead WT (1975) Supraclavicular nerve-entrapment syndrome. J Bone Joint Surg [Am] 57:119.
9. Gruber W (1865) eichert's Archiv, 703p. Cited by Laidlaw PP (1902) A Supraclavicularis Proprius (Gruber). J Anat Physiol 36:417-418.
10. Haller (1766) Elem Physiol, iii, p.46. Cited by Laidlaw PP (1902) A Supraclavicularis Proprius (Gruber). J Anat Physiol 36:417-418.
11. Havet E, Duparc F, Tobenas-Dujardin AC, Muller JM, Fréger P (2007) Morphometric study of the shoulder and subclavicular innervation by the intermediate and lateral branches of supraclavicular nerves. Surg Radiol Anat 29(8):605-10.
12. Hyrtl (1858) Sitzungsberichte der K. K. Akademie in Wien, xxix, p.265. Cited by Laidlaw PP (1902) A Supraclavicularis Proprius (Gruber). J Anat Physiol 36:417-418.
13. Jeleu L, Surchev L (2007) Study of variant anatomical structures (bony canals, fibrous bands, and muscles) in relation to potential supraclavicular nerve entrapment. Clin Anat 20: 278-85.
14. Jinguji Y, Takisawa A (1983) Rare case of m. supraclavicularis singularis (Gruber). Kaibogaku Zasshi 58(6):630-3.
15. Jupiter JB, Leibman MI (2007) Supraclavicular nerve entrapment due to clavicular fracture callus. J Shoulder Elbow Surg 16:13-4.
16. Knott JF (1880) Muscular Anomalies. J Anat Physiol 15:139-140.
17. Laidlaw PP (1902) A Supraclavicularis Proprius (Gruber). J Anat Physiol 36:417-418.
18. Le Double AF (1897) Traité des variations du système musculaire de l'homme. Paris, Librairie C. Reinwald Schleucher Frères, Editeurs, v II. Cited by Laidlaw PP (1902) A Supraclavicularis Proprius (Gruber). J Anat Physiol 36:417-418.
19. Macalister A (1875) Additional observations on muscular anomalies in human anatomy (third series), with a catalogue of the principal muscular variations hitherto published. Trans Roy Irish Acad Sci 25:1-134. Cited by Bryce TH (1899) Note on a Group of Varieties of the Pectoral Sheet of Muscle. J Anat Physiol 34:75-78.
20. Mehta A, Birch R (1997) Supraclavicular nerve injury: the neglected nerve?. Injury 28:491-192.
21. Mori (1949) Studies on the musculature of the back of the fetus, especially comparative studies on it of the twin fetus, on the m. trapezius. Kaibogaku Zasshi 24:109. Cited by Bergman R.A., Afifi A.K., Miyauchi R., 2006. Illustrated Encyclopedia of Human Anatomic Variation. Opera. [URL: http://www.anatomyatlases.org/AnatomicVariants/AnatomyHP.shtml](http://www.anatomyatlases.org/AnatomicVariants/AnatomyHP.shtml) [accessed July 2008].
22. Omokawa S, Tanaka Y, Miyauchi Y, Komei T, Takakura Y (2005) Traction neuropathy of the supraclavicular nerve attributable to an osseous tunnel of the clavicle. Clin Orthop Relat Res 431:238-40.
23. Papadatos D (1980) Supraclavicular nerves piercing the clavicle—a study on 10 cases. Anat Anz 147: 371-381.
24. Stadler H (1930) Über einen Musculus supraclavicularis proprius. Anat Anz 69:284-286.
25. Testut L (1884) Les Anomalies Musculaires chez l'homme. Expliquées par l'anatomie comparée. Leur Importance en Anthropologie. Paris: Masson. 58-59 p.
26. Tubbs RS, Salter EG, Oakes WJ (2006) Anomaly of the supraclavicular nerve: case report and review of the literature. Clin Anat 19:599-601.
27. Turner W (1874) Further Examples of Variations in the Arrangement of the Nerves of the Human Body. J Anat Physiol 8:297-299.
28. Whitmore I, Verlag GT (IFAA-FCAT) (2001) Terminologia Anatómica - International Anatomical Terminology. 1st ed. Madrid: Médica Panamericana, XII, 348 p.