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Research Article

The Pars Angularis Fascia Colli; What is it? Proposal For a Correct Anatomic Term

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Abstract

The pars angularis of the superficial layer of the neck fascia is poorly described in anatomical and surgical literature, it is a part of the fascia of the neck not very well known, but constant, whose description and location have been studied by anatomists, and its relevance in neck and maxillofacial surgery is currently recognized. A review of classic anatomy books and articles related to this subject was conducted. The different anatomical characteristics of these fascias were precisely explained, detailing their shapes, boundaries, insertions, and relationships within the suprahyoid region. The different names used and the errors in their interpretation are also being discussed. After analyzing the consulted bibliography and given the results, it was proposed a complete description of the pars angularis fascia colli and a nomenclature based on the principles of Terminologia Anatomica (TA), also suggesting a change of terminology according to the principles of the Federative International Programme for Anatomical Terminology (FIPAT): pars angulus mandibulae-sternocleidomastoideus fasciae cervicalis.

Keywords: *fascia neck, pars angularis, angular tract, submandibular, parotid, Terminologia Anatomica, anatomical nomenclature.*

INTRODUCTION

A correct, exact, concise and detailed anatomical nomenclature is a cornerstone of communication not only in anatomy and related subjects but also in other medical branches and in the whole medical education. Terminologia Anatomica fulfills this task but some important structures are still missing there.

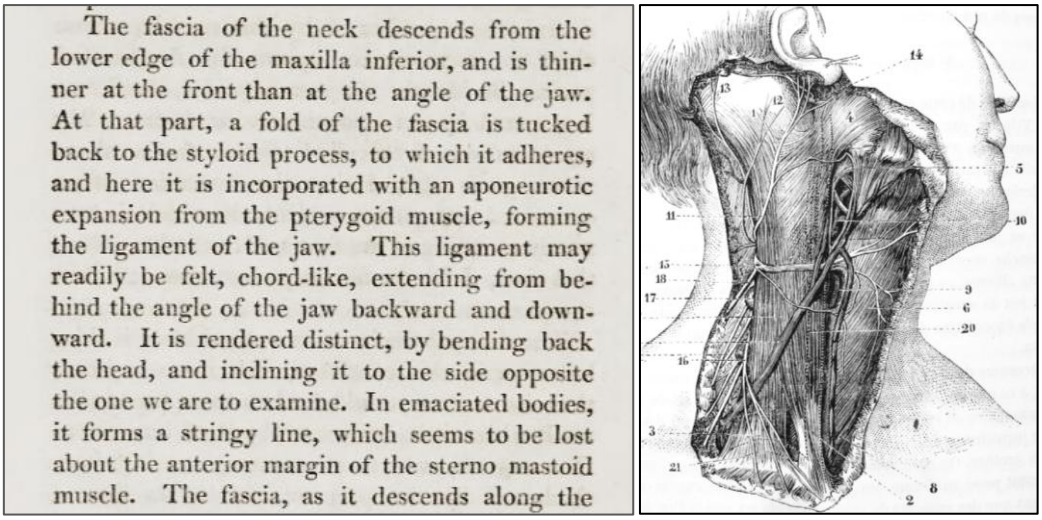
The International Federation of Anatomical Associations developed the International Anatomical Terminology (TA), which is written in Latin and from which the translation into the corresponding language must be made. It also establishes that: the names of structures must be informative; eponyms and homonyms must be eliminated to avoid confusion; and structures in the same anatomical regions must have harmonized names [1].

The first edition of the Terminologia Anatomica (TA) was published in 1998 by the Federative Committee for Anatomical Terminology, whereas the second edition (TA2) was issued in 2019 by the Federative International Programme for Anatomical Terminologies -FIPAT-.

Although not all anatomists agree that the Terminologia Anatomica (TA) deserves due consideration, as many clinicians, researchers and teachers use their own versions of terminology, and medical students must adhere to the version that is used by their instructors [2].

The fasciae of the head and neck have been a subject of controversy since their first description by Englishman Allan Burns (1781-1813) in 1811 under the name: *ligament of the Jaw* [3]. Some attribute the discovery to Alfred Richet

(1816-1891) who believed that it had not been reported and called it *aponevrose d'insection* (1860) [4] -*see figure 1*-. Modern textbooks of anatomy and surgery, however, have treated them very briefly and inaccurately.



The fascia of the neck descends from the lower edge of the maxilla inferior, and is thinner at the front than at the angle of the jaw. At that part, a fold of the fascia is tucked back to the styloid process, to which it adheres, and here it is incorporated with an aponeurotic expansion from the pterygoid muscle, forming the ligament of the jaw. This ligament may readily be felt, chord-like, extending from behind the angle of the jaw backward and downward. It is rendered distinct, by bending back the head, and inclining it to the side opposite the one we are to examine. In emaciated bodies, it forms a stringy line, which seems to be lost about the anterior margin of the sterno mastoid muscle. The fascia, as it descends along the

Figure 1. Description of the fascia of the mandible by Allan Burns, 1811 [3]. First representation (1860) of fascial condensation called pars angularis, marked with the number 4 [4].

Anatomists and surgeons know that there is a fascia that separates the submandibular gland from the parotid gland, but they do not know its origin, correct location, components and its true implication in surgery, so we are going to describe what this part of the neck fascia is and what its correct anatomical name would be, based on the principles proposed by the 2nd edition of the Terminologia Anatomica (TA2) from 2019.

In particular, the questions addressed by the study include: This part of the superficial investing cervical fascia called *Pars Angularis Fascia Colli,* what is it, where is it? Does this have a correct anatomical terminology? these are questions that we ask ourselves and we will try to find answers.

MATERIAL AND METHOD

The inclusion criteria were virtual access to anatomy texts and articles available on the Open Library website (2018), Google Books, Google Scholar, Gallica (the digital library portal of the National Library of France (BnF), PubMed, Cochrane, Scielo.org, and Archive.org, published since 1811 in French, English, German, and Spanish.

Once the working languages were established and the selected terms compiled, we proceeded to analyze them to determine if the anatomical terminology truly conforms to the parameters of univocity, precision, conciseness, and universality.

Descriptions of the *pars angularis fascia colli* and its synonyms (many names for a single entity) and polysemy (many meanings for a single term) and eponyms were searched and compared. We also consulted with a Latin linguistics expert to determine the correct Latin terminology that should be used.

Published texts on maxillofacial, head and neck anatomy and surgery were selected, prioritizing those who first described the fascia and ligaments at issue and the relevance of their authors.

Direct observations in 8 surgeries of the suprahyoid region were made and 4 cadavers head were dissected. Surgical interventions have allowed us to perform segmental anatomical studies, according to the surgical procedure, which allows us to visualize in vivo the fascial and glandular structures, evaluate the possibilities of dissociating the planes and appreciate their vasculature.

Scientific articles in the field were reviewed to verify that the selected terms had not been corrected in other publications. In each document, the detailed description of this part of the cervical fascia was analyzed. The documents that described each of the fascial condensations in this region were then classified.

RESULT

The Fascial Condensation Called: *Pars Angularis Fascia Colli.*

Anatomically, fascia are important in circumscribing and separating various structures such as muscle groups, blood vessels and nerves. Clinically, they are important for the guidance and understanding of the course of orofacial infections, as well as in surgical techniques of the neck and facial region.

The fascia of the neck has been standardized after 200 years. As it is known, in the neck we have: the superficial investing cervical fascia (*fascia investiens superficialis colli, TA2),* the fascia of infrahyoid muscles *(fascia musculorum infrahyoideum, TA2),* and the deep investing cervical fascia *(fascia investiens profunda colli, TA2)*, carotid sheet, and visceral cervical fascia.

As Poirier said: *there is nothing else in the neck, and everything else is simply a subdivision of these groups of organs, independent of each other by their origin and function* [5]. Although they are often described as distinctly separated structures, they actually constitute a continuous system of sponge-like layers containing muscles, blood vessels, bones, nerves, and viscera [6].

There is no anatomical structure that is not limited or separated from another by a connective tissue layer. Cells or compartments are formed, and planes of separation or detachment are established, which allows movement even between the smallest anatomical structures.

Development of the Fascia

The fascia has been explained from embryology, and the development of the endocervical laminar system is understood. When the muscular and visceral buds differentiate, in any topography, part of the mesenchyme is left aside unused and eventually derives into the filling connective tissue, thus creating the laminar system of the region [7]. Beginning with the *longus colli* muscle and the infrahyoid muscles, these are the first structures to appear in the embryo from 9 to 12 weeks, and finally between weeks 20 and 25, in the final stage of development.

Some of these cellular spaces are created by the opposing action of two muscular systems and are used as natural passageways for visceral or neurovascular elements, thus connecting adjacent regions [8].

The mechanical tension of the region, generate compression of the filling collagen tissue and give rise to the fusion fascia. The vestigial sites of this fusion process is located between the deep layer of the sternocleidomastoid fascia and the intermediate tendon of the omohyoid muscle, between this tendon and the vascular sheet, and between the latter and the visceral sheet [9].

This is a vestige of the union of the primitive insertion of the muscle into the mandible (parotid-mastoid muscle, described by Chudzinski [10]), an insertion that still exists in solipeds [12, 33].

Anatomical Description

The angle of the mandible marks an aponeurotic junction whose arrangement is rather difficult to understand. Let us remember that there is no consensus on the fascia of the neck, especially the parotid fascia. We will try to give our opinion on the reading and interpretation that the bibliography gives us.

We will follow the research of the classical anatomists, such as Testut and Rouvière & Olivier [12-13] and others works [3,4,10,15,19,36, 53]. After reading many descriptions of this part of the cervical fascia, this one encompasses the concepts of anatomical research on the subject.

This fascial condension, which we will now call, pars *angularis,* that we will give you in this research to facilitate and make our presentation clearer and to avoid confusion with the multiple terminologies found. This *pars angularis* is composed of two sheets:

a. by the mandibular band that connects the sternocleidomastoid muscle to the mandible,
b. and by an expansion of the fascia of the styloid diaphragm, which runs inferiorly and anteriorly, attaches to the mandibular band laterally and to the stylomandibular ligament medially, filling the interval between these two ligaments.

Superiorly and medially to this angle, the part of the fascia is formed by the mandibular head of the styloglossus muscle or by its fibrous layer, and more superiorly, by the stylomandibular ligament and the thin fascial part of the anterior parotid wall. This part of the fascia is attached inferiorly and posteriorly by the stylomandibular ligament to the underlying retromandibular part -*see figure 2 (A and C)*- [12-14].

This interglandular part of the fascia *(pars angularis),* closes the two glandular compartments fairly well. The lower end of the parotid fascia is closed by the interglandular part of the superficial layer of the deep cervical fascia. This is the

name given to a thick, strong fibrous layer that extends from the sheet of the sternocleidomastoid muscle to the angle of th8e mandible.

This sheet is kept taut, on the one hand, anteriorly, by the action of the mandibular fascial condensation (*pars angularis*), which connects it to the angle of the mandible, and by its connections with the infrahyoid muscle fascia [14] -*see figure 2 (A-C)*.

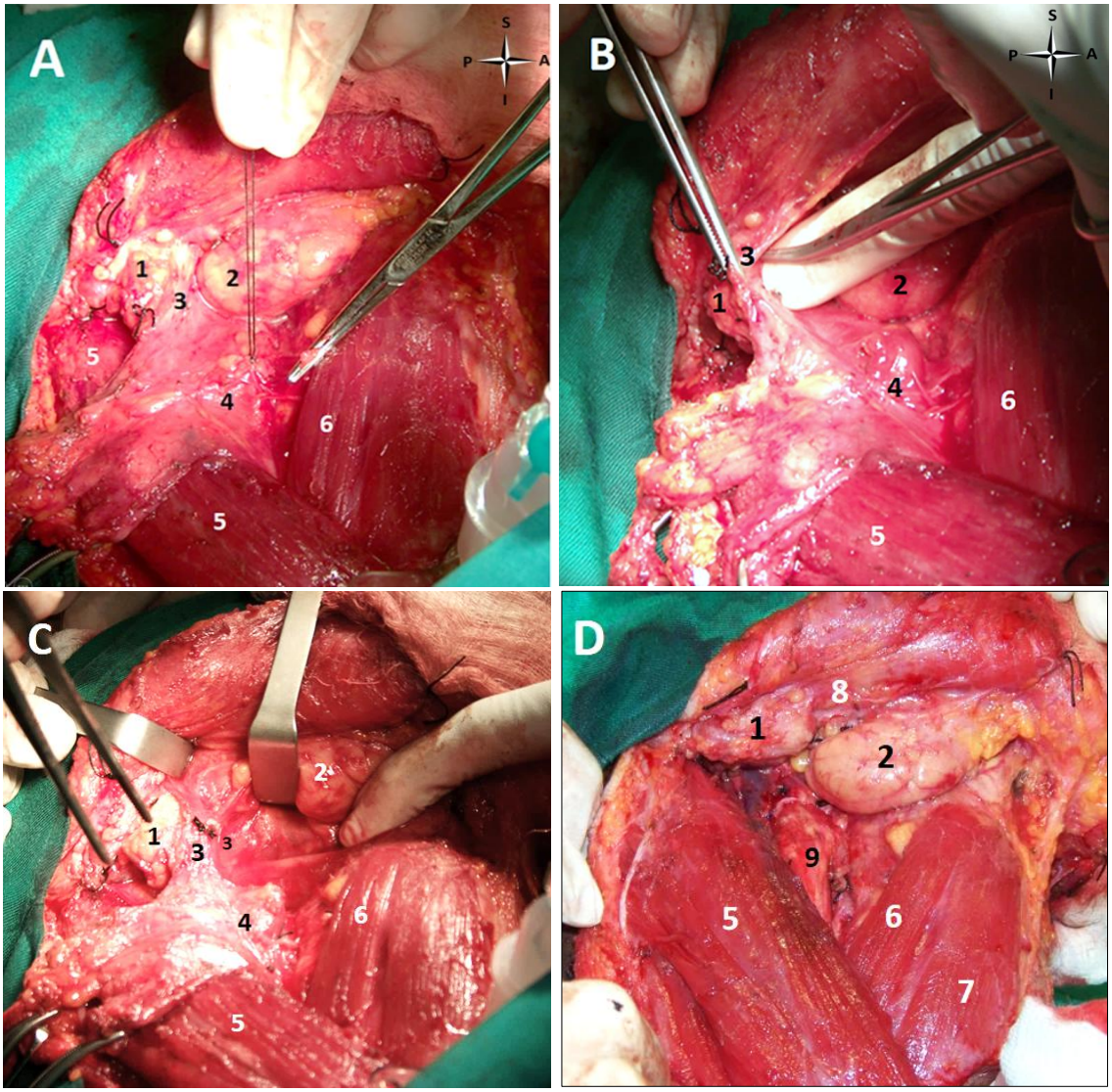


Figure 2. View of a right-side neck dissection. (A) the superficial and middle lamina of the deep cervical fascia dissected outward. (B) a finger dissecting the fascia over the posterior belly of the digastric muscle, which does not seat despite digital pressure. (C) View of the superficial layer of the deep cervical fascia (pars angularis) at its lateral and interglandular border. (D) neck dissection completed. 1- parotid gland; 2- submandibular gland; 3- superficial lamina of the deep cervical fascia; 4- middle lamina of the deep cervical fascia; 5- sternocleidomastoid muscle; 6- omohyoid muscle; 7- sternocleidohioid muscle; 8- inferior border of the mandible; 9- bifurcation of the carotid artery.

This mandibular fascia condensation (*pars angularis*), is triangular in shape and runs obliquely in both the sagittal and coronal planes. The superficial edge blends with the investing fascia and the deep edge is placed more anteriorly and blends with the fascial sheets of the posterior belly of the digastric and stylohyoid muscle. The two faces in relation to the glands are concave -*see figure 3*-.

The anterior surface which faces obliquely anterolaterally passes in its upper part behind and deep to the posterior pole of the submandibular gland [15], deepening the submandibular gland. The posterior surface which faces obliquely posteromedially overlies the lower pole of the parotid gland superiorly [15]. This superficializes the lower pole of the parotid gland -*see figure 3*.

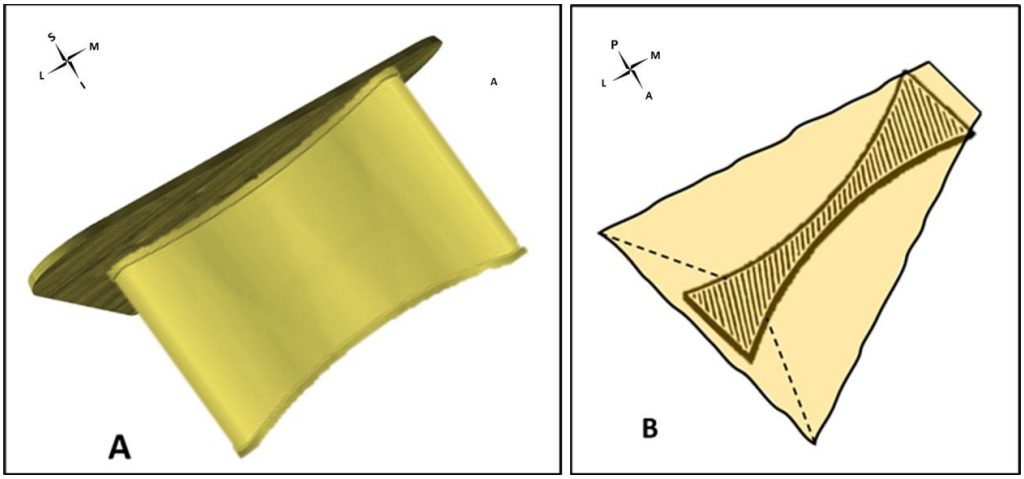


Figure 3. Schematic representation of the pars angularis of the superficial layer of deep cervical fascia on the right side of the neck, which separates the parotid gland from the submandibular gland. A) Anterior view. B) Lateral view.

Viewed from the parotid side, its surface is concave and continues internally with a fibrous plane composed of the styloid insertions of the styloglossus and the stylomandibular ligament.

Once the fascia is incised posterior to the angular tract, a distinct surgical pocket is created -*see Fig. 2 (1)*- [15]. The boundaries of this pocket are:

- Anteriorly. Above we have the angle of the mandible and its associated musculature and from this and passing down to the hyoid bone is the angular tract.
- Posteriorly. The sternocleidomastoid fascia.
- Medially. The fascia covering the stylohyoid and posterior belly of the digastric muscle. Further down, the anterior border of the sternocleidomastoid forms the external boundary of the two suprahyoid and infrahyoid regions.
- Laterally. The parotid fascia on the deep side of the lower portion of the parotid gland and its content and the investing layer of the deep cervical fascia.

This fascia continues superiorly with the sheet of fascia extending between the stylomandibular ligament and the stylohyoid muscle, inferiorly with the superficial layer of the parotid fascia, anteriorly with the masseteric fascia, and posteriorly with the posterior belly digastric and sternocleidomastoid muscle sheet [16].

This fibrous sheet forms a partition between the two glandular fasciae, often very resistant and not penetrable by injections. In this sense we can deduce that this resistance of the fascia at this point at the time of dissection is partly due to the anatomical elements that pass through this area (facial artery and vein, retromandibular vein and lymph nodes) [4] -*see figure 2 (B)*.

Content and Elements that run through it.

The dividing barrier is not a homogeneous partition, but rather the superposition of all the cervical aponeurotic planes, both muscular and vascular [17].

Veins: The external jugular vein passes posteriorly to the *pars angularis*, giving off the anterior division of the retromandibular vein that flows into anterior facial vein forming the common facial vein.

The anterior division of the retromandibular vein passes deep within the *pars angularis* and lateral to the digastric muscle in most cases, and superficial to the *pars angularis* to a lesser extent [17].

This fascia also runs medially and posteriorly toward the external carotid artery and internal jugular vein [17].

This would be a reference point to access level IIa of the cervical lymphadenectomy, taking as a precaution the location of the anterior division of the retromandibular vein for its ligation and cutting.

Nerve: Above the cervical branch of the facial nerve, the marginal mandibular branch of the facial nerve exits the parotid gland. The nerve first crosses the angular part of the cervical fascia, which extends to the mandibular angle, and then rests on it.

The cervical branch of facial nerve is typically located in the plane between the *tela subcutanea* (TA) (*superficialis fascia – in English-)* and superficial investing cervical fascia, and innervates the platysma along its deep surface [15].

An injury to this nerve in cosmetic surgery can cause paralysis since the platysma muscle has an important action at the corner of the mouth. The marginal branch is situated in to the deep fascia, and therefore it is more protected from inadvertent deep dissection [18].

Lymphatic Node: There is also a nodule (retroglandular nodule) described by Poulsen in the intermaxillary-parotid septum (*pars angularis*) [19], and cited by others [12, 20, 30]. This would constantly occupy the inferior part of the parotid and would be applied near the mandibular angle against the *pars angularis* [30]. This is deeper than the other submandibular nodules and is located posterior to the gland [14]. Which is why it is removed as part of level IIb of the cervical lymphadenectomy.

Synonymia. The Multiple Terminologies

Since the 19th century many describe it, but without giving a name for example: Some, like Velpeau describes it, but does not give it a name [31].

Several terms are stated repeatedly in anatomy textbooks, thesis, journal articles and none are included in the Anatomical Terminology (TA).

International Anatomical Terminology was developed by the International Federation of Anatomical Associations and written in Latin. It must be translated into the vernacular by anatomists who use these terms, taking into account that the names of the structures must have an informative value [32, 33] and indicates the elimination of eponyms and proper names.

Let's look at all the terms used to identify this condensation of the superficial layer of the cervical fascia, and we'll start with the French anatomists who persisted in using the old terms until 1955 and who described them by their location:

- Bandelette (band) maxillaire, bandelette interglandular [5, 13, 33, 34].
- Bandelette (band) maxillaire du sternocleiodmastoidien [11]
- Bandelette (band) parotide-maxillaire [17, 36].
- Bandelette (band) d´inserción facial [5,17].
- Bandellete (band) sterno-maxillaire [30, 37].
- Cloison (septum) sous-maxillo-parotidienne or interglandular [38].
- Cloison (septum) intermaxillo-parotidienne [12,13]
- Bandellete (band) mandibulaire [63].

The German-speaking anatomists, primarily the Viennese anatomical school, which had been more attached to Latin terminology since 1895, attempted to adhere more closely to a scientific name. The oldest record we have found of the term for *pars angularis fascia colli* appears with Zuckerkandl [39]. Their successors in the following decades continued with this terminology or with synonyms:

- Septum interglandular [21,40-42].
- Pars angularis fasciae colli [39, 40, 43-45, 50].
- Tractus angularis [51, 52].
- Tractus angularis fasciae colli [40, 45].
- Tractus angularis der fascia cervicalis superficialis [47].

In the United States and English-language publications and anatomy textbooks, the few workers who do recognize this structure, the *pars angularis* was abbreviated by Julius Tandler it as *tractus angularis* [44], and Sicher, a Tandler student, apparently introduced the term to the United States, and it's the one used in English literature. It is also seen in the translations of Pernkoff and Sobotta [40,53].

In Latin America and Spain and other Romance language countries, most of them follow the French trend, who have been the classic authors, and they use the translation of its terminology and other synonyms such as:

- *Tracto angular de la fascia cervical* (angular tract of the cervical fascia) [54].
- *Cintilla submaxilar y tabique interglandular* (submandibular band and interglandular septum) [55].
- *Cintilla maxilar* (mandibular band) [56].

The Hungarians, Kiss and Szentágothai, made the most accurate approximation of the anatomical term in Latin, *Tractus angularis laminae superficialis faciae colli* [57].

Some even mention two different terms in the same book, such as Sebileau [36], Rouvière [13], Testut [38], Truffert [17], Tandler [50], Taure [54], and Pernkopf [40], Sobotta [52].

Polysemy. Confusions Interpreting the *Pars Angularis.*

The two glands whose deep edges are separated from each other by an interglandular fascia (superficial investing cervical fascia) forms part of the angular tract [21]. Under this statement we are going to see some errors in the naming of this fascia.

Seward (1968) gets confused to say: *The angular tract of fascia is a thickening in the investing layer of deep fascia which spreads downward from the stylomandibular ligament and the angle of the mandible*. Seward confuses the mandibulo-stylohyoid ligament with *pars angularis* [16].

The ligament (named by Shimada *et al.* mandibulo-stylohyoid ligament), is between the area of the mandibular angle and the stylohyoid ligament and the greater cornu of the hyoid bone; they were found in all specimens. They describe the mandibulo-stylohyoid ligament (Because of its ligamentous nature and its specific and consistent attachments) [22], and they understand it to be interpreted as *pars angularis.*

Years later Shimada & Gasser described 3 types of ligaments, defining type 2 as the following: the ligament was more extensive and extended as a wide sheet of connective tissue from the angle of the mandible to the stylohyoid ligament and that according to them it continues with the stylomandibular ligament superiorly (seen in 22% according to Shimada & Gasser) -*see figure 3 (2)*- [23].

This "mandibulo-stylohyoid ligament", would not be what anatomists have called for ever stylomandibular ligament, and Sato describes it: *...as a reinforced part of a fascial lamella that extends from the styloid process and styloid ligament to the region of the mandibular angle, partly attached to the mandible, but with the majority of fibers blending into the fascia on the medial surface of the medial pterygoid muscle* [24], or as Meckel called it, the stylo-mylo-hyoid ligament [25], which anatomists have represented it in the images of anatomical texts, as a band or fascia condensation, the stylomandibular ligament.

In the dissections performed by Jovanovic, he was able to demonstrate the ligament but he misinterpreted the name by relating it to the *pars angularis* just like Shimada *et al.* If you look at the photograph - *see image 4 (1)* -, Jovanovic himself says that: *this fascial lamina would not completely separate both glands* [26], because the other part of the cervical fascia layer (the pars angularis) must be added to complete the separation of the two glands.

Standring *et al*., in Gray's Anatomy since 2005 edition, already mentions that there is a dispute on this point to clarify [27], something we agree on. However, in the 2021 edition, they admit that the pars angularis is formed by the stylomandibular ligament and the mandibulostylohyoid ligament, only differing as to whether it is part of the deep cervical fascia or lies above it [28].

The concern comes to us because some authors are already relating this name *pars angularis* with the "mandibulo-stylohyoid ligament" [29, 30].

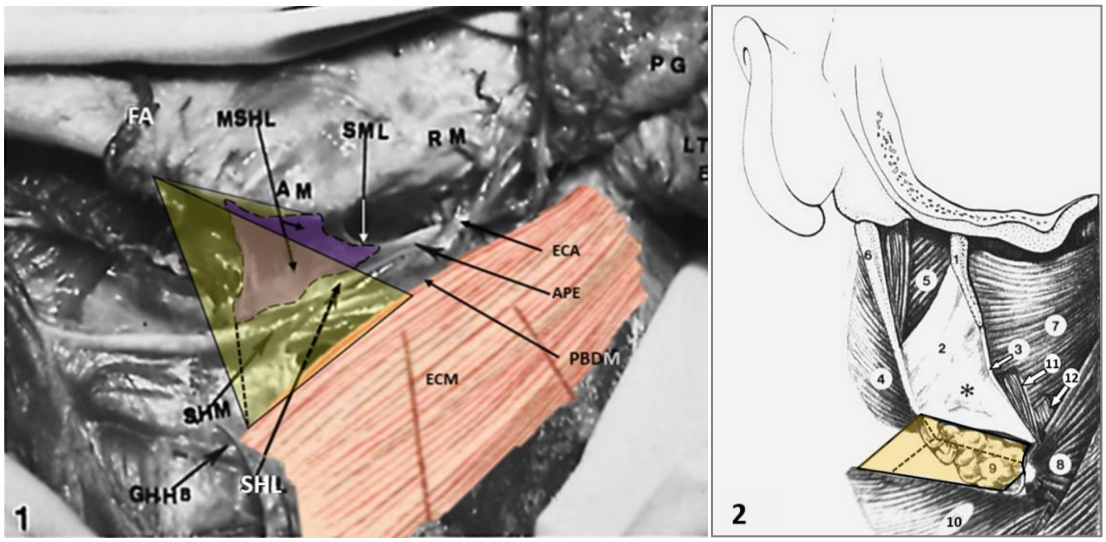


Figure 4. (1) The location of the mandibulo-stylohyoid ligament (purple) and superficial layer of the cervical fascia (yellow) (Modified from [26]). SSB Spine of sphenoid bone; SPML spheno-mandibular lig; SP styloid process; SML stylomandibutar lig; SHL stylohyoid lig; AM angle of the mandible; MSHL mandibulo-stylohyoid lig; HB hyoid bone. 2) Posterior view: The yellow structure is a fascial part or tractus angularis. (2) Posterior view of a dissection of that particular ligament type II. 1- styloid process; 2- stylomandibular ligament; 3- stylohyoid ligament; 4- masseter muscle; 5- medial pterygoid muscle; 6- neck of mandible; 7- superior pharyngeal constrictor muscle; 8- middle

pharyngeal constrictor muscle; 9- submandibular gland; *- "mandibulo-stylohyoid ligament"; 11- stylohyoid muscle; 12- digastric muscle (Modified from [23]).

Cruveilhier mentions the *pars angularis* as a *cloison fibreuse* (fibrous septum). In the fifth edition, he apparently illustrates the *pars angularis* under the term *aponevrose sus-hyoïdienne* (suprahyoid fascia) [49], but gives no further details.

Henle, illustrate a stylohyoid ligament and describe the cervical fascia and the structures that form the *pars angularis* [52], illustrating it later (1866) but without defining it. Tandler described the *pars angularis fascia colli* and as he himself says, he abbreviates it as *tractus angularis* [50]; additionally, it illustrates what appears to be the "mandibulo-stylohyoid ligament" of Shimada *et al*. but with the name of stylomandibular ligament.

Gray´s anatomy in the 19th and 20th centuries confuses it with the stylomandibular ligament, mentioning that this ligament as part of cervical fascia and separates both glands. Many English-language anatomy texts from those centuries do the same.

Eponyms

Moreover, some even give it eponyms, like *"fascia or angular tract of Eisler"* [58,62] not being Paul Eisler (1862-1935), the first to describe it. Eisler himself mentions Zuckerkandl and Told, who use that term [51]. Or as others have called it *"bandellete (band) maxillaire or sterno-maxillaire de Charpy" -by Adrien Charpy (1848–1911)-*, [62-64]. In any case, if it had an eponym, it would be the name of Burns who first described it.

DISCUSSION

Since Burns in 1811, had identified the presence of this part of the fascia that separates the parotid from the submandibular gland, anatomists described it, but without giving a specific name, only fibrous or fascial tissue. Since then, much confusion has been generated.

In our literature review and the observation in the neck dissection surgeries we have performed and some dissections on cadavers, we share the idea that this portion of fascia that separates the submandibular gland from the parotid gland is composed of the following elements:

a) by the mandibular condensation (a thickening of the superficial investing cervical fascia), which connects the sternocleidomastoid muscle to the mandible (the true *pars angularis*) [12,13], a kind of hollowed pyramid where the parotid gland rests -*see figure 3*-.
b) and, by an expansion of the superficial investing of the cervical fascia of the styloid diaphragm, which runs inferiorly and anteriorly, attached to the mandibular condensation (*pars angularis*) laterally and to the stylomandibular ligament medially, and fills the space between these two ligaments [4,13-14,17, 67].

The submandibular gland, facial artery and facial vein lays anterior to the *pars angularis* and the cervical and mandibular branches of the facial nerve may be retracted within the fascia-muscle-skin flap. The angle of the mandible is exposed for manipulation or for further exposure by subperiosteal dissection [15].

A principal problem of anatomy and its precise ubication and terminology are the *fasciae* [68, 69]. Malgaigne used to call the fascia of the neck, in a pictorial analogy that he masterfully captured, said: *…the cervical aponeurosis, a kind of anatomical proteus, which presents itself with a new form under the pen of each of those who have attempted to describe* [72].

Moreover, a disadvantage that characterizes anatomy, however, is the accumulation of synonymy and polysemy for the same structure. In other natural sciences, synonyms are considered a burden that would be gladly removed; if, by mistake, several names have been assigned to a structure, the others disappear as soon as the legitimate one is established. However, in anatomical works, and not only in academic ones, obsolete names or eponyms are brought to light.

As Pérez-Rojas *et al.* (2018) points out, a review of the historical origins, which supports the use of terminology, allows us to understand the complexity involved in establishing a common anatomical terminology. For this reason, incorporating historical origins into these types of descriptions strengthens the holistic understanding of anatomical terms and provides context for the search [73].

Since Tokyo, in 1975, amendments were made to the nominates with some important conclusions for this research, such as: Latin is the universal language for the study of morphological sciences; each structure must have a single name; names must be brief, and have informative and descriptive value [73].

These three conclusions are key tools when investigating terms that, having a single name in Latin, have been translated into the vernacular language with more than one synonymous term [1].

Without going into semantic details, we see that the word *pars angularis fascia colli* suggests that it is located in the neck, but it doesn't specify the exact point in the neck fascia.

Based on the fact that its structure (fascia-connective tissue) is part of a larger structure (the fascia of the neck), therefore the term *tractus* (Lat. from *trahere* = to drag, to conduct, or extent) is incorrect, the correct one and more specific would be, *pars*. Its location (the neck) and insertions (angle mandible and sternocleidomastoid muscle) have been taken into account.

Although the term *sternocleido-mastoideus* we will just say that it is a combination of Greek and Latin [74], it was the one who persisted after numerous proposals in the Nomina of Basel (1895) [75], It is the longest word in anatomy, have 22-letter; the acronym SCM, which is familiar and useful to anatomists, physicians, surgeons, medical researchers, and medical students; when writing it, can be used.

This part of the neck is covered by the *superficialis fascia -tela subcutanea TA2-* (surrounding the platysma) and the superficial investing cervical fascia; the terms *colli* and *cervicalis* are synonyms in Latin, since the Nomina Anatomica (1955), the term *cervicalis* is used, which has become more popular among the scientific community.

All this would generate a correct term, but excessively long name; e.g., *pars angulus mandibulae-sternocleidomastoideus lamina superficialis fasciae cervicalis.*

However correct this last term it is too long, we would change the term *lamina superficialis fasciae cervicalis*, to just *fascia cervicalis*, to refer to the fascia that surrounds the sternocleidomastoid muscle (being the most visible and dissectable in surgery) and is closely related to the deep investing cervical fascia.

After all this, we recommend that the term to be used would be: *pars angulus mandibulae-sternocleidomastoideus fasciae cervicalis* (mandibular angle-sternocleidomastoideus part of fascia of the neck -*in English*-).

CONCLUSION

It was established that the *pars angularis facia colli* is composed of one part of the superficial layer from the deep fascia of the neck. It is formed by two fascias: the mandibular condensation (a thickening of the superficial layer of the cervical fascia), and the expansion of the fascia of the styloid diaphragm (stylomandibular, stylohyoid).

For a body part to be named, it must be recognized as a discrete structure of sufficient importance, so as surgical techniques are perfected, anatomy does so simultaneously.

Which is why this part of the fascia is important as part of lymphadenectomy techniques, as it is an entry point to level IIa through the anterior border of the sternocleidomastoid muscle and as the transition point from level Ib to IIa in the superior part of the lymphadenectomy of the neck. During selective neck dissection, definition of the angle created by the deep anterosuperior aspect of the sternocleidomastoid and the posterior belly of the digastric muscle helps free nodes located high and posteriorly in level IIa [76, 77].

Therefore, it is necessary to know the structures that passes through it for its resection, conservation or reference point in cases of surgeries in this region such as mandibular fractures [19, 78, 79], parotidectomies [15, 29], submandibulectomies [15, 80,81], cosmetic surgeries [18, 82, 83] and infectious processes [24, 67].

It is necessary to raise awareness about the application of unified, up-to-date, and uniform anatomical terminology in communications, scientific publications, and in the teaching of anatomy.

We found some discrepancies regarding the interpretation of *pars angularis.* However, it is argued that the term lacks descriptive value; it presents many synonyms, polysomy and some eponyms that do not provide information about the location, conformation, or shape of the structure.

Based on this, we can propose that the *pars angularis fascia colli* its correct term should be, *pars angulus mandibulae-sternocleidomastoideus fascia cervicalis* (mandibular angle- sternocleidomastoid part of fascia of the neck -in English-), because it specifies where it is inserted and where it originates, and to write it would be: *pars angulus mandibulae-SCM fascia cervicalis.*

We make this contribution, convinced that the final result of FIPAT's work will be a very detailed, precise, and correct nomenclature, appropriate and satisfying the needs of both anatomists, surgeons and clinicians around the world, and we hope that this new term will be reviewed and included by the FIPAT in the Terminologia Anatomica (TA), as suggested

Musil *et al.* [84] about this and other terms, and in this way it is standardized in a single anatomical term for anatomy and surgery books.

Further research, both histological and anatomical, would be necessary to determine whether there are real limits or whether these adjacent fascia and ligaments are part of the same fascial structure.

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