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Original Article / Orijinal Araştırma

Investigation of the Adjectives in Terminologia Anatomica, in Terms Related to the Nervous System and Sense Organs

Terminologia Anatomica'da Yer Alan Sinir Sistemi ve Duyu Organları ile İlgili Terimlerdeki Sıfatların İncelenmesi

Mücahit AYDIN[1], Hilal IRMAK SAPMAZ[2]

[1]Tokat Gaziosmanpaşa University, Institute of Postgraduate Education, Department of Anatomy, Tokat, Türkiye
[2]Tokat Gaziosmanpaşa University, Faculty of Medicine, Department of Anatomy, Tokat, Türkiye

Abstract

Aim: Effective and correct use of terminology in anatomy education and other medical sciences is very important for healthy communication between scientists. Due to the low number of scientific studies on both medical and anatomical terminology, this study was conducted to help increase the existing knowledge in this field.

Material and Method: Terminologia Anatomica, published by Thieme in 1998, was used in the study.

Results: A total of 2431 terms related to the nervous system and sensory organs were analyzed, and a total of 625 different adjectives within these terms were evaluated in terms of origin, degree and form and classified into classes. A total of 492 different adjectives were included in the 1924 terms under the title of nervous system. There are 133 different adjectives in 507 terms under the title of sense organs. There are a total of 2753 adjectives in both sections we have analyzed, together with the number of repetitions. It was observed that most of these adjectives were of Latin origin, two-shaped and had a gradus positivus degree of comparison.

Conclusion: The data we obtained as a result of this study revealed the distribution and characteristics of adjectives in terms of origin, degree and form within the terminology. We think that our study will contribute to the development of medical terminology and will also help make the anatomy course more understandable and memorable for students.

Keywords: Anatomical terminology, nervous system, sense organs, adjectives

Öz

Amaç: Anatomi eğitiminde ve diğer tıbbi bilimlerde terminolojinin etkili ve doğru şekilde kullanılması bilim insanları arasında sağlıklı iletişim kurulabilmesi için çok önemlidir. Hem tıbbi hem de anatomik terminoloji üzerine yapılan bilimsel çalışmaların sayıca az olması sebebiyle bu alanda var olan bilgi birikiminin arttırılabilmesine yardımcı olmak amacıyla bu çalışma yapılmıştır.

Gereç ve Yöntem: Çalışmamızda Thieme tarafından 1998 yılında yayımlanmış olan Terminologia Anatomica kullanılmıştır.

Bulgular: Sinir sistemi ve duyu organları ile ilgili toplam 2431 terim incelenmiş ve bu terimlerin içerisinde yer alan toplam 625 farklı sıfat köken, derece ve şekil bakımından değerlendirilerek sınıflara ayrılmıştır. Sinir sistemi başlığı altında yer alan 1924 terimin içerisinde toplam 492 farklı sıfat yer almaktadır. Duyu organları başlığı altındaki 507 terim içerisinde 133 farklı sıfat bulunmaktadır. İncelemiş olduğumuz her iki bölüm içerisinde tekrar sayıları ile birlikte toplam 2753 sıfat mevcuttur. Bu sıfatların büyük kısmının Latince kökenli, iki şekilli ve gradus positivus karşılaştırma derecesine sahip olduğu görülmüştür.

Sonuç: Bu çalışma neticesinde elde ettiğimiz veriler, sıfatların terminoloji içerisindeki köken, derece, şekil bakımından dağılımlarını ve özelliklerini ortaya koymuştur. Çalışmamızın tıbbi terminolojinin gelişimine katkıda bulunacağını, ayrıca anatomi dersinin öğrenciler için daha anlaşılır ve ayrıca akılda kalıcı olmasına yardımcı olacağını düşünmekteyiz.

Anahtar Kelimeler: Anatomik terminoloji, sinir sistemi, duyu organları, sıfatlar

Corresponding *(İletişim)*: Mücahit Aydın, Tokat Gaziosmanpaşa University, Institute of Postgraduate Education, Department of Anatomy, Tokat, Türkiye
E-mail *(E-posta)*: mchtydn97@gmail.com
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INTRODUCTION

Anatomy is one of the most basic sciences in medical education. It is very important to learn anatomy well in order to form the basis for other health sciences education. The medical field has a wide and important Anatomy terminology. Understanding and learning the terminology rules is also important to prevent confusion among health workers.[1] Success in learning and practicing anatomy is directly proportional to knowledge of terminology. Terminology learning is intensive at the beginning of health sciences education and is continuous throughout further education and working life.[2]

Terminologia Anatomica (TA) is a list of Latin terms for the structures of the human body and their English equivalents. Common decisions have been reached on the content of the TA through meetings held at various times for many years. Lastly, an updated version was published by the Federative Committee on Anatomical Terminology (FCAT) in 1998 and approved by the International Federation of Associations of Anatomists (IFAA).[3]

Most of the anatomical terminology consists of Latin terms. However, Latin is not used as a spoken language, making it difficult for students to understand the terms. The aim of this study is to classify the adjectives found in the terms for the sensory organs and nervous system in TA according to their linguistic origin, their charms and their degrees in order to facilitate their understanding and to contribute to the field of anatomical terminology.

MATERIAL AND METHOD

In order to identify the adjectives analyzed in this study, Terminologia Anatomica, published in 1998, which is considered to be the most recent and comprehensive of the anatomical term lists, was used. TA contains 7537 anatomical terms.[4] The adjectives in the terms under the title of nervous system and sense organs of the TA are analyzed according to their origins, degrees and the adjectives they have received.

Our study does not require ethics committee approval. This study was derived from the data of the master's thesis titled " Investigation of the Adjustments in Terminologia Anatomica, in Terms Related to the Nervous System and Sense Organs" published in Tokat Gaziosmanpaşa University, Department of Anatomy in 2023.

In order to access the adjective conjugations, roots and meaning information in the tables of these adjectives, Anatomi Sözlüğü, Güncel Tıp Terimleri Sözlüğü, Tıpta Önek ve Sonekler Sözlüğü, Tıbbi Latince, Tıbbi Teminoloji, Yeni Tıp Sözlüğü, Anatomi Terimleri Kılavuzu resources were utilized.[5-11] In addition, Wiktionary (https://www.wiktionary.org)[12] and Health Terms (https://www.saglikterimleri.com)[13] websites were used as online dictionaries and AnatoNomina (http://www.terminologia-anatomica.org/en)[14] website was used to identify the terms of nervous system and sensory organs in TA.

Separate tables were created for each chapter and the adjectives mentioned in each chapter were grouped and analyzed with these tables.

RESULTS

TA has a total of 2431 terms under the title of nervous system and sensory organs. The total number of adjectives in the terms nervous system and sense organs is 625. It was determined that there were 2279 adjectives in the nervous system and 474 adjectives in the terms of sensory organs, for a total of 2753 adjectives in both sections. The classification of adjectives in terms of their linguistic origins, inflections and degrees of comparison are given in **Tables 1** and **2** respectively.

The linguistic origins and repetitions of adjectives in the terms nervous system in **Table 3** and sense organs in **Table 4** are given in alphabetical order.

Latin adjectives are divided into three groups according to the number of charms they take: three-shaped, two-shaped and single-shaped.[15] In our study, it was observed that three-shaped adjectives in nervous system terms were repeated 698 times, two-shaped adjectives 1566 times and one-shaped adjectives 15 times. The three-shaped adjectives in the sense organs adjectives were repeated 13 times in total, the two-shaped adjectives were repeated 330 times in total, and the one-shaped adjectives were repeated 5 times in total.

Table 1. Analyzing the Adjectives in the Nervous System Terms

	Language Origins			Conjugations			Degrees of Comparison		
	LA	GR	LA-GR	Three	Two	Single	Positivus	Comparativus	Superlativus
	386	60	46	177	304	11	483	6	3
Number of Adjectives						492			
Number of Terms						1924			

LA: Latin, GR: Greek

Table 2. Analyzing the Adjectives in the Terms of Sensory Organs

	Language Origins			Conjugations			Degrees of Comparison		
	LA	GR	LA-GR	Three	Two	Single	Positivus	Comparativus	Superlativus
	107	17	9	53	78	2	126	6	1
Number of Adjectives						133			
Number of Terms						507			

LA: Latin, GR: Greek

Table 3. Adjectives in Nervous System Terms

Adjectives	Origin	Repeat Number
Abdominalis, -e	LA	4
Abducens, -entis	LA	2
Accessorius, -a, -um	LA	11
Acusticus, -a, -um	GR	3
Afferens, -entis	LA	1
Affixus, -a, -um	LA	1
Albus, -a, -um	LA	12
Alveolaris, -e	LA	5
Ambiens, -ntis	LA	1
Ambiguus, -a, -um	LA	1
Aminergicus, -a, -um	LA	8
Amygdaloideus, -a, -um	GR	2
Amygdalopiriformis, -e	LA	1
Analis, -e	LA	2
Angularis, -e	LA	1
Anococcygeus, -a, -um	GR, LA	1
Ansiformis, -e	LA	3
Anterior, -ius	LA	89
Anterodorsalis, -e	LA	1
Anterolateralis, -e	LA	8
Anteromedialis, -e	LA	4
Anteroventralis, -e	LA	1
Anuloolivaris, -e	LA	1
Aorticorenalis, -e	GR	1
Aorticus, -a, -um	GR	2
Arcuatus, -a, -um	LA	9
Articularis, -e	LA	2
Ascendens, -entis	LA	1
Auricularis, -e	LA	4
Auriculotemporalis, -e	LA	2
Autonomicus, -a, -um	GR	8
Basalis, -e	LA	10
Basilaris, -e	LA	3
Brevis, -e	LA	3
Bulbopontinus, -a, -um	LA, GR	1
Bulboreticulospinalis, -e	LA	2
Caeruleospinalis, -e	LA	1
Caeruleus, -a, -um	LA	3
Calcarinus, -a, -um	LA	1
Callosus, -a, -um	LA	4
Cardiacus, -a, -um	GR	9
Carotici/cus, -a, -um	LA	6
Caroticotympanic(i)us, -a, -um	GR	2
Caudalis, -e	LA	4
Caudatolenticularis, -e	LA	1
Caudatus, -a, -um	LA	1
Cavernosus, -a, -um	LA	3
Centralis, -e	LA	26
Cerebellaris, -e	LA	12
Cerebelloolivaris, -e	LA	2
Cervicalis, -e	LA	17
Cervicothoracicus, -a, -um	GR	1
Choroideus, -a, -um	LA	14
Ciliaris, -e	LA	8
Cinereus, -a, -um	LA	2
Coccygeus, -a, -um	GR	4
Cochlear, -e, -is	LA	11

Table 3. Adjectives in Nervous System Terms (Continued)

Adjectives	Origin	Repeat Number
Coeliacus, -a, -um	GR	3
Collateralis, -e	LA	6
Commissuralis, -e	LA	27
Communicans, -tis	LA	21
Communis, -e	LA	6
Corticomesencephalicus, -a, -um	LA, GR	1
Corticonuclearis, -e	LA	5
Corticopontinus, -a, -um	LA	2
Corticoreticularis, -e	LA	4
Corticorubralis, -e	LA	1
Corticospinalis, -e	LA	6
Corticotectalis, -e	LA	1
Corticothalamicus, -a, -um	LA	2
Cranialis, -e	LA	8
Craniocervicalis, -e	GR, LA	1
Craniospinalis, -e	GR	1
Cuneatus, -a, -um	LA	7
Cuneiformis, -e	LA	2
Cuneocerebellaris, -e	LA	1
Cuneospinalis, -e	LA	1
Curvatura, -ae	LA	2
Cutaneus, -a, -um	LA	30
Deferentialis, -e	LA	1
Dentalis, -e	LA	4
Dentatus, -a, -um	LA	9
Diagonalis, -e	GR	2
Digastricus, -a, -um	GR	1
Dopaminergicus, -a, -um	LA	8
Dorsalis, -e	LA	42
Dorsolateralis, -e	LA	1
Dorsomedialis, -e	LA	4
Dura, -ae	LA	5
Efferens, -entis	LA	1
Emboliformis, -e	LA	1
Encephalicus, -a, -um	GR	3
Endolemniscalis, -e	GR, LA	1
Endopeduncularis, -e	GR	1
Entericus, -a, -um	GR	1
Epithalamicus, -a, -um	GR	5
Equinus, -a, -um	LA	1
Ethmoidalis, -e	GR	2
Externus, a, um	LA	16
Facialis, -e	LA	4
Fasciolaris, -e	LA	1
Fastigiospinalis, -e	LA	1
Fastigium, -ii	LA	1
Femoralis, -e	LA	3
Fimbriodentatus, -a, -um	LA	1
Flocculonodularis, -e	LA	1
Fornix, -icis	LA	4
Frontopontinus, -a, -um	LA	2
Ganglionaris, -e	LA	11
Gelatinosus, -a, -um	LA	4
Geniculatus, -a, -um	LA	6
Geniculocalcarinus, -a, -um	LA	1
Genitalis, -e	LA	1
Genitofemoralis, -e	LA	1

Table 3. Adjectives in Nervous System Terms (Continued)

Adjectives	Origin	Repeat Number
Gigantocellularis, -e	GR	2
Gingivalis, -e	LA	3
Globosus, -a, -um	LA	1
Glossopharyngeus, -a, -um	GR	3
Gracilis, -e	LA	6
Gracilispinalis, -e	LA	1
Granulosus, -a, -um	LA	1
Griseus, -a, -um	LA	16
Habenularis, -e	LA	6
Habenulointerpeduncularis, -e	LA	1
Hepaticus, -a, -um	GR	2
Hippocampalis, -e	GR	1
Horizontalis, -e	LA	3
Hypogastricus, -a, -um	GR	3
Hypoglossalis, -e	GR	1
Hypoglossus, -a, -um	GR	5
Hypothalamicus, -a, -um	GR	8
Hypothalamohypophysialis, -e	GR	1
Hypothalamospinales, -e	LA	4
Iliohypogastricus, -a, -um	GR	1
Ilioinguinalis, -e	GR, LA	1
Iliopubicus, -a, -um	GR, LA	1
Imus, -a, -um	LA	1
Incertus, -a, -um	LA	2
Inferior, -ius	LA	58
Inferolateralis, -e	LA	1
Inferomedialis, -e	LA	2
Infraclavicularis, -e	LA	1
Infrapatellaris, -e	LA	1
Infratrochlearis, -e	LA	1
Infundibularis, -e	LA	2
Innominatus, -a, -um	LA	1
Insularis, -e	LA	1
Intercalatus, -a, -um	LA	1
Intercostalis, -e	LA	1
Intercostobrachialis, -e	LA	1
Intercruralis, -e	LA	1
Interfascicularis, -e	LA	3
Interganglionaris, -e	LA	1
Intergeniculatus, -a, -um	LA	1
Interlobaris, e	LA	2
Intermediolateralis, -e	LA	1
Intermediomedialis, -e	LA	1
Intermedius, -a, -um	LA	21
Intermesentericus, -a, -um	LA, GR	1
Internus, -a, -um	LA	17
Interosseus, -a, -um	LA	3
Interpeduncularis, a, -um	LA	3
Interpolaris, -e	LA	1
Interpositospinalis, -e	LA	1
Interstitialis, -e	LA	6
Interthalamicus, -a, -um	LA	2
Interventricularis, -e	LA	2
Intrabiventralis, -e	LA	1
Intralaminaris, -e	LA	1
Intraparietalis, -e	LA	1
Intraparotideus, -a, -um	LA, GR	1

Table 3. Adjectives in Nervous System Terms (Continued)

Adjectives	Origin	Repeat Number
Intrathalamicus, -a, -um	LA	1
Jugularis, -e	LA	1
Juxtarestiformis, -e	LA	2
Koniocellularis, -e	GR, LA	1
Labialis, -e	LA	4
Lacrimalis, -e	LA	2
Lacunosus, -a, -um	LA	1
Laryngopharyngealis, -e	GR	1
Lateralis, -e	LA	113
Lenticularis, -e	LA	5
Lienalis, -e	LA	1
Limitans, -ntis	LA	2
Linearis, -e	LA	3
Lingualis, -e	LA	6
Longitudinalis, -e	LA	14
Longus, -a, -um	LA	1
Lumbalis, -e	LA	6
Lumbosacralis, -e	LA	3
Lunatus,-a, -um	LA	1
Lunogracilis, -e	GR, LA	1
Magnocellularis, -e	LA	8
Magnus, -a, -um	LA	6
Major, -us	LA	6
Mamillothalamicus, -a, -um	LA, GR	2
Linearis, -e	LA	3
Lingualis, -e	LA	6
Longitudinalis, -e	LA	14
Longus, -a, -um	LA	1
Lumbalis, -e	LA	6
Lumbosacralis, -e	LA	3
Lunatus,-a, -um	LA	1
Lunogracilis, -e	GR, LA	1
Magnocellularis, -e	LA	8
Magnus, -a, -um	LA	6
Major, -us	LA	6
Mamillothalamicus, -a, -um	LA, GR	2
Mammarius, -a, -um	LA	2
Mammillaris, -e	LA	3
Mammillotegmentalis, -e	LA	1
Mandibularis, -e	LA	7
Marginalis, -e	LA	5
Medialis, -e	LA	84
Medianus, -a, -um	LA	16
Mediodorsalis, -e	LA	1
Medioventralis, -e	LA	1
Medius, -a, -um	LA	10
Medullaris, -e	LA	18
Medulloreticulospinalis, -e	LA	1
Mesencephalicus, -a, -um	LA	3
Mesentericus, -a,-um	GR	4
Minor, -us	LA	8
Mixtus, -a, -um	LA	1
Molecularis, -e	LA	5
Motorius, -a, -um	LA	4
Multiformis, -e	LA	2
Muscularis, -e	LA	23
Musculocutaneus, -a, -um	LA	1

Table 3. Adjectives in Nervous System Terms (Continued)

Adjectives	Origin	Repeat Number
Myentericus, -a, -um	GR	1
Nasalis, -e	LA	9
Nasociliaris, -e	LA	3
Nasopalatinus, -a, -um	LA	1
Niger, -a, -um	LA	2
Obscurus, -a, -um	LA	2
Obturatorius, -a, -um	LA	3
Occipitalis, -e	LA	13
Occipitofrontalis, -e	LA	2
Occipitopontinus, -a, -um	LA	2
Occipitotectalis, -e	LA	1
Occipitotemporalis, -e	LA	6
Oculomotorius, -a, -um	LA	6
Oesophagealis, -e	LA	4
Olfactorius, -a, -um	LA	20
Olivaris, -e	LA	10
Olivocerebellaris, -e	LA	1
Olivocochlearis, -e	LA	1
Olivospinalis, -e	LA	2
Opercularis, -e	LA	1
Opticus, -a, -um	GR	8
Oralis, -e	LA	1
Orbitalis, -e	LA	4
Oticus, -a, -um	GR	3
Ovaricus, -a, -um	LA	1
Palatinus, -a, -um	LA	3
Pallidus, -a, -um	LA	8
Palmaris, -e	LA	1
Palpebralis, -e	LA	2
Pancreaticus, -a, -um	GR	1
Parabigeminalis, -e	GR, LA	1
Parabrachialis, -e	GR	4
Paracentralis, -e	GR	6
Paracommissuralis, -e	GR, LA	1
Parafascicularis, -e	LA, GR	1
Paraflocculari, -e	LA	2
Paragigantocellularis, -e	LA	2
Parahippocampalis, -e	GR	2
Paralemniscalis, -e	GR, LA	1
Paramedianus, -a, -um	LA	5
Paranigralis, -e	GR, LA	1
Paraolfactorus, -a, -um	GR, LA	3
Parapeduncularis, -e	GR, LA	1
Parasolitarius, -a, -um	GR, LA	1
Parasympathicus, -a, -um	GR	11
Parataenialis, -e	GR, LA	1
Paraterminalis, -e	GR, LA	1
Paraventricularis, -e	GR, LA	4
Paraventriculohypophysialis, -e	GR, LA	2
Parietalis, -e	LA	5
Parietooccipitalis, -e .	LA	4
Parietopontinus, -a, -um	LA	2
Parvocellularis, -e	LA	8
Peduncularis, -e	LA	4
Pedunculopontinus, -a, -um	LA	1
Pellucidus, -a, -um	LA	1
Pelvicus, -a, -um	LA	5

Table 3. Adjectives in Nervous System Terms (Continued)

Adjectives	Origin	Repeat Number
Perforans, -ntis	LA	1
Perforatus, -a, -um	LA	2
Periamygdaloideus, -a, -um	GR	1
Periarterialis, -e	GR, LA	1
Pericallosus, -a, -um	GR	1
Pericardiacus, -a, -um	LA	1
Pericentralis , -e	GR, LA	1
Pericuneatus, -a, -um	GR, LA	2
Perihypoglossalis, -e	GR	1
Perinealis, -e	GR	2
Periolivaris, -e	GR, LA	1
Peripeduncularis, -e	GR, LA	1
Periventricularis, -e	LA	7
Perizonalis, -e	GR, LA	1
Peroneus, -a, -um	LA	4
Petrosus, -a, -um	LA	6
Pharyngeus, -a, -um	GR	5
Phrenicoabdominalis, -e	LA	1
Phrenicus, -a, -um	LA	4
Pialis, -e	LA	1
Pigmentosus, -a, -um	LA	1
Pinealis, -e	LA	3
Piriformis, -e	LA	1
Plantaris, -e	LA	6
Pontocerebellaris, -e	LA	4
Pontoreticulospinalis, -e	LA	2
Postcentralis, -e	LA	3
Postcommissuralis, -e	LA	1
Posterior, -ius	LA	105
Posterolateralis, -e	LA	9
Posteromedialis, -e	LA	4
Postganglionicus, -a, -um	LA	1
Postpyramidalis, -e	LA, GR	1
Postremus, -a, -um	LA	2
Prebiventralis, -e	LA	1
Precentralis, -e	LA	3
Precommissuralis, -e	LA	3
Precuneus, -i	LA	2
Preganglionicus, -a, -um	LA	1
Pregeniculatus, -a, -um	LA	1
Premamillaris, -e	LA	2
Preoccipitalis, -e .	LA	2
Preolivaris, -e	LA	1
Preopticus, -a, -um	LA, GR	6
Prepyramidalis, -e	LA, GR	1
Presacralis, -e	LA	1
Pretectalis, -e	LA	4
Primus, -a, -um	LA	2
Principalis, -e	LA	4
Profundus, -a, -um	LA	9
Projectio, -onis	LA	1
Proprius, -a, -um	LA	13
Prostaticus, -a, -um	GR	1
Pterygopalatinus, -a, -um	LA	5
Pudendus, -a, -um	LA	2
Pulmonalis, -e	LA	4
Pulvinaris, -e	LA	6

Table 3. Adjectives in Nervous System Terms (Continued)

Adjectives	Origin	Repeat Number
Pyloricus, -a, -um	GR	1
Pyramidalis,-e	GR	5
Quadrangularis, -e	LA	2
Quadratus, -a, -um	LA	1
Quadrigeminalis, -e	LA	1
Quadrigeminus, -a, -um	LA	2
Quartus, -a, um	LA	7
Radiatus, -a, -um	LA	1
Radicularis, -e	LA	1
Raphespinalis, -e	GR, LA	4
Rectalis, -e	LA	4
Recurrens, -entis	LA	3
Renalis, -e	LA	4
Restiformis, -e	LA	4
Reticularis, -e	LA	20
Reticulospinalis, -e	LA	2
Retinohypothalamicus, -a, -um	LA, GR	1
Retroambiguus, -a, -um	LA	1
Retrobulbaris, -e	LA	1
Retrochiasmaticus, -a, -um	LA, GR	1
Retrofacialis, -e	LA	1
Retroflexus, -a, -um	LA	1
Retrolentiformis, -e	LA	1
Retroolivaris, -e	LA	2
Retroposterolateralis, -e	LA	1
Retrorubralis, -e	LA	1
Retrotrigeminalis, -e	LA	1
Reuniens, -ntis	LA	1
Rhinalis, -e	GR	1
Rhomboideus, -a, -um	GR	2
Rostralis, -e	LA	5
Rostrodorsalis, -e	LA	1
Ruber, -bra, -brum	LA	1
Rubrobulbaris, -e	LA	1
Rubronuclearis, -e	LA	1
Rubroolivaris, -e	LA	4
Rubropontinus, -a, um	LA	1
Rubrospinalis, -e	LA	4
Sacralis, -e	LA	5
Sacrococcygeus, -a, -um	LA	1
Salivatorius, -a, -um	LA	2
Saphenus, -a, -um	GR	1
Scrotalis, -i	LA	2
Secundarius, -a, -um	LA	1
Secundus, -a, -um	LA	2
Semilunaris, -e	LA	5
Sensorius, -a, -um	LA	12
Separans, -ntis	LA	1
Septomarginalis, -e	LA	1
Simplex, -icis	LA	1
Solitariospinalis, -e	LA	1
Solitarius, -a, -um	LA	11
Somaticus, -a, -um	GR	1
Spinalis, -e	LA	25
Spinobulbar, -es	LA	2
Spinocerebellaris, -e	LA	5
Spinocervicalis	LA	1

Table 3. Adjectives in Nervous System Terms (Continued)

Adjectives	Origin	Repeat Number
Spinocuneatus, -a, -um	LA	1
Spinogracilis, -e	LA	1
Spinohypothalamicus, -a, -um	LA, GR	3
Spinomesencephalicus, -a, -um	LA, GR	3
Spinoolivaris, -e	LA	4
Spinoperiaqueductales, -us	LA, GR	3
Spinoreticularis, -e	LA	4
Spinotectalis, -e	LA	4
Spinothalamicus, -a, -um	LA	5
Spinovestibularis, -e	LA	2
Spiralis, -e	LA	1
Splanchnicus, -a, -um	GR	7
Stapedius, -a, -um	LA	1
Stylohyoideus, -a, -um	GR	1
Subbrachialis, -e	LA	1
Subcaeruleus, -a, -um	LA	1
Subcallosus, -a, -um	LA	2
Subclavius, -a, -um	LA	3
Subcommissuralis, -e	LA	1
Subcostalis, -e	LA	1
Subcuneiformis, -e	LA	2
Subfornicalis, -e	LA	3
Subhypoglossalis, -e	LA, GR	1
Sublenticularis, -e	LA	1
Sublentiformis, -e	LA	1
Sublingualis, -e	LA	4
Submandibularis, -e	LA	4
Submucosus, -a, -um	LA	1
Subparabrachialis, -e	LA, GR	1
Subparietalis, -e	LA	2
Subscapularis, -e	LA	1
Subserosus, -a, -um	LA	1
Subthalamicus, -a, -um	GR	3
Subtrigeminalis, -e	LA	1
Sulcomarginalis, -e	LA	1
Superficialis, -e	LA	6
Superior, -ius	LA	63
Superolateralis, -e	LA	1
Suprachiasmaticus, -a, -um	LA, GR	1
Supraclavicularis, -e	LA	5
Supragenicularis, -a, -um	LA	1
Supralemniscalis, -e	LA	1
Supramammillaris, -e	LA	1
Supramarginalis, -e	LA	1
Supraopticohypophysialis, -e	LA, GR	2
Supraopticus, -a, -um	LA, GR	4
Supraorbitalis, -e	LA	1
Suprarenalis, -a, -um	LA	1
Suprascapularis, -e	LA	1
Supraspinalis, -e	LA	1
Supratrochlearis, -e	LA	1
Suralis, -e	LA	1
Sympathicus, -i	GR	11
Tangentiales, -e	LA	1
Tectobulbaris, -e	LA	4
Tectoolivaris, -e	LA	2
Tectopontinae, -us	LA	4

Table 3. Adjectives in Nervous System Terms (Continued)

Adjectives	Origin	Repeat Number
Tectoreticularis, e	LA	1
Tectospinalis, -e	LA	4
Tegmentalis, -e	LA	13
Telencephalicus, -a, -um	GR	7
Temporalis, -e	LA	9
Terminalis, -e	LA	12
Terminatio, -ones	LA	1
Tertius, -a, -um	LA	5
Testicularis, -e	LA	1
Thalamoparietalis, -e	LA	1
Thoracicus, -a, -um	LA	10
Thoracodorsalis, -e	GR, LA	1
Thyrohyoideus, -a, -um	GR	1
Tonsillaris, -e	LA	2
Transversarius, -a, -um	LA	8
Transversus, -a, -um	LA	8
Trapezoideus, -a, -um	GR	5
Triangularis, -e	LA	3
Trigeminalis, e	LA	9
Trigeminospinalis, -e	LA	1
Trigeminothalamicus, -a, -um	LA	3
Trigeminus, -a, -um	LA	5
Trochlearis, -e	LA	3
Tubarius, -a, -um	LA	1
Tympanicus, -a, -um	GR	11
Ulnaris, -e	LA	3
Uncinatus, -a, -um	LA	2
Uretericus, -a, -um	LA	1
Uterovaginalis, -e	LA	1
Utricularis, -e	GR	1
Utriculoampullaris, -e	GR, LA	1
Vagalis, -e	LA	4
Vagoauricularis, -e	LA	1
Vagomeningeus, -a, -um	LA	1
Vagus, -a, -um	LA	4
Vascularis, -e	LA	1
Vasculosus, -a, -um	LA	2
Ventralis, -e	LA	34
Ventrobasalis, -e	LA	1
Ventromedialis, -e	LA	2
Ventroposterior, -ius	LA	1
Verticalis, -e	LA	2
Vesicalis, -e	LA	1
Vestibularis, -e	LA	12
Vestibulospinalis, -e	LA	3
Visceralis, -e	LA	3
Zonalis, -e	LA	1
Zygomaticus, -a, -um	GR	3

LA: Latin, GR: Greek

Table 4. Adjectives in Sensory Organs Terms

Adjectives	Origin	Repeat Number
Accessorius, -a, -um	LA	2
Acusticus, -a, -um	GR	9
Adiposus, -a, -um	GR	3
Ampullaris, -e	LA	5
Anterior, -ius	LA	25
Anularis, -e	LA	1
Aquosus, -a, -um	LA	1
Arteriosus, -a, -um	GR	2
Auricularis, -e	LA	16
Basalis, -e	LA	2
Basilaris, -e	LA	2
Brevis, -e	LA	1
Bulbus, -i	LA	11
Caecus, -a, -um	LA	2
Caroticus, -a, -um	LA	1
Centralis, -e	LA	3
Choroidocapillaris, -e	LA, GR	1
Ciliaris, -e	LA	10
Circularis, -e	LA	1
Cochleariformis, -e	LA	1
Cochlearis, -e	LA	20
Communis, -e	LA	5
Conjunctivalis, -e	LA	2
Corneoscleralis, -e	LA, GR	1
Cribrosus, -a, -um	LA	5
Cupularis, -e	GR	2
Ellipticus, -a, -um	LA	1
Endolymphaticus, -a, -um	GR	3
Episcleralis, -e	GR	2
Epitympanicus, -a, -um	GR	1
Excretorius, -a, -um	LA	1
Externus, -a, -um	LA	13
Facialis, -e	LA	2
Fibrocartilagineus, -a, -um	LA	1
Flaccidus, -a, -um	LA	1
Foraminosus, -a, -um	LA	1
Fuscus, -a, -um	LA	1
Ganglionicus, -a, -um	LA	1
Hyaloideus, -a, -um	GR	3
Incudialis, -e	LA	1
Incudomalleolaris, -e	LA	1
Incudostapedialis, -e	LA	1
Inferior, -ius	LA	14
Internus, -a, -um	LA	13
Intertragicus, -a, -um	LA, GR	1
Intervaginalis, -e	LA	1
Intracranialis, -e	LA	1
Intralaminaris, -e	LA	1
Intraocularis, -e	LA	3

Table 4. Adjectives in Sensory Organs Terms (Continued)

Adjectives	Origin	Repeat Number
Iridicus, -a, -um	LA	1
Iridocornealis, -e	GR, LA	2
Jugularis, -e	LA	1
Labyrinthicus, -a, -um	LA, GR	3
Lacrimalis, -e	LA	14
Lateralis, -e	LA	13
Lenticularis, -e	LA	1
Leptomeningicus, -a, -um	GR, LA	1
Levator, -oris	LA	1
Limitans, -ntis	LA	4
Longitudinalis, -e	LA	2
Longus, -a, -um	LA	1
Luteus, -a, -um	LA	1
Macularis, -e	LA	6
Major, -us	LA	3
Mastoideus, -a, -um	GR	4
Media, -ae	LA	4
Medialis, -e	LA	5
Membranaceus, -a, -um	LA	11
Meridionalis, -e	LA	1
Minor, -us	LA	3
Nasalis, -e	LA	4
Nasolacrimalis, -e	LA	1
Nervosus, -a, -um	LA	2
Obliquus, -a, -um	LA	3
Olfactorius, -a, -um	LA	3
Opticus, -a, -um	GR	5
Palpebralis, -e	LA	1
Palpebronasalis, -e	LA	1
Perichoroideus, -a, -um	GR, LA	1
Perilymphaticus, -a, -um	GR	1
Pigmentosus, -a, -um	LA	2
Pneumaticus, -a,- um	GR	1
Posterior, -ius	LA	25
Postlaminaris, -e	LA	1
Postremus, -a, -um	LA	1
Prelaminaris, -e	LA	1
Profundus, -a, -um	LA	1
Proprius, -a, -um	LA	3
Pupillaris, -e	LA	4
Pyramidalis,-e	GR	2
Radialis, -e	LA	1
Reticularis, -e	LA	1
Retrozonulare	LA	1
Reuniens, -ntis	LA	1
Saccularis, -e	LA	2
Sanguineus, -a, -um	LA	3
Secundarius, -a, -um	LA	2
Semicircularis, -e	LA	10

Table 4. Adjectives in Sensory Organs Terms (Continued)

Adjectives	Origin	Repeat Number
Semilunaris, -e	LA	1
Serratus, -a, -um	LA	1
Simplex, -icis	LA	2
Singularis, -e	LA	1
Sphericus, -a, -um	GR	1
Spiralis, -e	LA	17
Stapedialis, -e	LA	3
Reuniens, -ntis	LA	1
Saccularis, -e	LA	2
Sanguineus, -a, -um	LA	3
Secundarius, -a, -um	LA	2
Semicircularis, -e	LA	10
Semilunaris, -e	LA	1
Serratus, -a, -um	LA	1
Simplex, -icis	LA	2
Singularis, -e	LA	1
Sphericus, -a, -um	GR	1
Spiralis, -e	LA	17
Stapedialis, -e	LA	3
Styloideus, -a, -um	GR	1
Subarachnoidalis, -e	LA	1
Superficialis, -e	LA	1
Superior, -ius	LA	20
Supratragicus, -a, -um	LA	1
Suspensorium, -a, -um	LA	1
Tarsalis, -e	LA	1
Tectorius, -a, -um	LA	1
Tegmentalis, -e	LA	1
Temporalis, -e	LA	4
Tendineus, -a, -um	LA	1
Terminalis, -e	LA	2
Trabecularis, -e	LA	1
Transversus, -a, -um	LA	2
Triangularis, -e	LA	2
Tubarius, -a, -um	LA	1
Tympanicus, -a, -um	GR	5
Tympanostapedialis, -e	GR, LA	1
Utricularis, -e	GR	5
Utriculosaccularis, -e	GR, LA	1
Uvealis, -e	LA	1
Vascularis, -e	LA	1
Vasculosus, -a, -um	LA	3
Verticalis, -e	LA	1
Vestibularis, -e	LA	11
Vestibulocochlearis, -e	LA	3
Vitreus, -a, -um	LA	5
Zonularis, -e	LA	2

LA: Latin, GR: Greek

Latin adjectives are classified into 3 groups: gradus positivus (degree of positivity), gradus comparativus (degree of comparison) and gradus superlativus (degree of superiority). Gradus positivus indicates the existence of only one quality, while gradus comparativus indicates a comparison between two objects. Gradus superlativus denotes the most superior among many objects.[9] Among the terms of the nervous system, gradus positivus adjectives were repeated 1938 times, gradus comparatus adjectives 329 times, gradus superlativus adjectives 12 times. Among the terms for sense organs, gradus positivus adjectives are repeated 383 times, gradus comparativus adjectives 90 times and gradus superlativus adjectives only 1 time.

DISCUSSION

Anatomical terminology, which enables the learning, development and progress of anatomy, is absolutely necessary for mutual communication between contributors to medical science. Understanding the rules of Latin grammar in terminology education is a facilitating factor in learning terms. Students learn the meaning, formation and usage features of terms with grammar rules. Thus, they have the chance to learn the terminology as a whole in a long-term and permanent way.[16] The use of Latin terminology needs to continue to be a common medical language, even though students have difficulty understanding and learning it.[17]

Many clinicians and anatomists use the terminology in their own way. However, it is the terms in the TA list that should be used and taught in medical education. Synonyms and obsolete terms in the terminology cast a shadow on teaching processes and scientific studies, and prevent correct communication between anatomists, leading to misunderstandings in scientific language.[18]

Latin-based terminology is indispensable not only for anatomy but for all medical sciences. Most of the anatomical terminology is of Latin and Greek origin. Terminology should not be seen only for educational or scientific study purposes. Above all, it serves a fundamental function for diagnosis, treatment and recognition of the human body. Therefore, terminology is also important for following scientific research and developing diagnostic and therapeutic techniques. Authors should follow the latest updated version of the TA in any training, translation and publishing activities.[19]

TA is a very valuable list but thinking only terms in the TA prevents us from recognizing some of the Latin terms used in real life. It is known that nomenclature such as zygapophysial joint is difficult to use in written and spoken language. It has been reported that facet joint discourse is used much more frequently instead of this nomenclature. This is not only seen in the clinic. It is known that many different uses that are not included in the TA are taught to students during medical education. Even if these uses and eponyms are not taught to students during their education, they are definitely encountered by students during clinical practice. Some suggestions are provided to expand the use of TA and it is stated that by implementing these suggestions, more widespread use of TA can be ensured.[20]

The history of anatomical terminology goes back more than 2500 years to ancient times. Some of the anatomical terms are colloquial and have not changed since ancient times. The medical terminology that exists today is based on the medical books of Hippocrates called "Corpus Hippocraticum". Hippocrates (460-370 BC) used the terms "acromion", "bronchus" and "peritoneum". In Rome, Aurus Cornelius Celcus (25 BC-50 AD) used the terms "cartilago", "patella" and "sutura". Rufus of Ephesus (late 1st century AD) wrote a book entitled "On the Naming of the Parts of the Body", which is recognized as the earliest treatise on anatomical terms. Cladius Galenos of Pergamon (129/130-199/200) introduced new terms such as "aponeurosis", "pylorus", "tarsus" and "thymus". Herophilos (3rd century BC), who was in Alexandria and regularly performed dissections there, introduced terms such as "duodenum", "prostata" and "pancreas" into medical terminology. From Aristotle (4th century BC), terms such as "meninx", "arteria", "trachea", "neuron", "ischium" have remained until today.[10,19,21]

Andreas Vesalius (Andreas van Wesel) (1514-1564) published the first comprehensive anatomy book in 1543, "De fabrica corporis humani libri septem", which included descriptions of the human body. With this book, some of the Greek and Arabic terms used until then were replaced by Latin terms. Jacobus Sylvius (1478-1555) used the terms created by Hippocrates and Galenos for bones, but created new terms such as "pectoralis, intercostalis" for muscles, vessels and nerves. Subsequently, between the 17th and 19th centuries, many new synonyms for the same anatomical structures were derived. As a result of the increasing number of synonyms in the following years, the number of terms reached approximately 50 000 by the end of the 19th century. But all of these terms referred to only 5000-6000 different structures.[19,22]

In 1895, the Anatomische Gesellschaft announced the first Latin list of anatomical terminology in an attempt to put an end to this term confusion. This list was later named Basiliensia Nomina Anatomica (BNA). Jenaiensia Nomina Anatomica (JNA) and Parisiensia Nomina Anatomica (PNA) were published in 1935 and 1955 respectively. In 1989, at a meeting in Brazil, the IFAA decided to establish a new anatomical terminology committee called FCAT. As a result of the work of this committee, the current TA list was published in 1998.[19]

Latin was used as a living language for 2500 years. But today, like many other languages, it has taken its place in history. Nevertheless, it is the basis of many of the languages that are widely used today (French, Spanish, Italian). Modern doctors do not need to know and learn Latin as a spoken and written language. This is because the Latin in medical terminology only requires that the terms are written and read correctly. Medical terms consist only of adjectives, nouns and numerical words. In Latin, adjectives (nomina

adjectiva) are used with nouns. Adjectives, which are not conjugated in Turkish and used with nouns without change, have different uses in Latin in terms of genus, number and case. The use of nouns and adjectives together is different in Latin than in Turkish. While in Turkish it is used as an adjective followed by a noun, in Latin it is the other way around. In Latin there is a grammatical rule called noun-adjective concordance (attributum). In order to understand the rules of medical terminology, it is necessary to know the properties of adjectives.[9] Looking at the literature, it was observed that in a study analyzing medical terminology, the adjectives in the movement system terms in the TA were evaluated in terms of origin, degree and shape.[23]

CONCLUSION

The importance of terminology for the development of medical sciences and anatomy cannot be ignored, as indicated by existing studies. Although the number of studies on terminology in our country is increasing day by day, it is insufficient. It is important to know and use the current terminology list for the development of medical sciences. We believe that our study, in which we analyzed the adjectives in the terms of the nervous system and sense organs, which are among the parts of the TA, will enlighten the subject of medical terminology and contribute to the existing body of knowledge.

ETHICAL DECLARATIONS

Ethics Committee Approval: Our study does not require ethics committee approval.

Informed Consent: Our study does not require informed consent.

Referee Evaluation Process: Externally peer-reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

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