Nombres históricos en anatomía y radiología de cabeza y cuello

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RESUMEN

El uso de epónimos es común en Medicina. La Radiología ha aceptado el uso de diferentes epónimos para describir una variedad de patologías y hallazgos de las imágenes. Sin embargo, muchos radiólogos desconocen el origen de estos términos y solo los recuerdan a fuerza de memorizarlos. El objetivo de esta presentación es describir el origen de algunos desórdenes asociados comúnmente a epónimos.
Se realizó una revisión de los mismos a partir de los artículos originales donde los autores describieron los diferentes escenarios que dieron lugar a estos hallazgos radiológicos. Esta discusión podría beneficiar la educación de los residentes, fellows y estudiantes de medicina ya que facilita la manera de recordar diferentes enfermedades tales como la fosa de Rossenmuller, el canal de Dorello y el ducto de Wharton.

Palabras clave: historia de la radiología, historia de la anatomía, epónimos.

ABSTRACT

The use of eponyms is common in medicine. Radiology has accepted the use of different eponyms to describe a variety of pathologies and imaging findings. However, most radiologists do not know the origins of them and are relegated to memorizing long lists. The aim of this presentation is to describe the origin of various disorders associated with a common eponym.
We will review the origin and author's original articles and scenarios that led to these initial discoveries. This approach is beneficial for educating residents, fellows and Medicine students as it is easier to remember different diseases by understanding origins as opposed to just memorizing lists. Pathologies that will be presented involved are Rossenmuller´s fossa, Dorello´s canal and Wharton´s duct.

Keywords: radiology history, anatomy history, eponyms.

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JOHANN CHRISTIAN ROSENMÜLLER (1771- 1820)

Johann Christian Rosenmüller (JCR) (**Figure 1**) was born on May 25, 1771, in Hessberg, a town in the area now called Veilsdorf in the district of Hildburghausen, Thuringia, Germany. His father, Johann Georg Rosenmüller (1736 to 1815), was a German protestant theologian and well-known orator. Although his father and brother took a more philosophical path, JCR combined his passions for illustrations, adventure, and medicine and began a long history of significant contributions to the academic field, as detailed below. In 1792 he went on to the University of Erlangen and began his studies in medicine. JCR received his doctorate in 1797, and by 1802 was appointed professor of anatomy and surgery at Leipzig. He was the author of many dissertations, articles, and books.

Figure 1. *Johann Christian Rosenmüller (1771- 1820).*

Apart from being a great anatomist, he was also an expert in speleology, the study of caves **(Figure 8).** His findings contributed then to the palaeobiology, the discipline that consist of inferring patterns of behaviour or physiological characteristics of extinct species of which only fossil evidence is vailable. His collections of fossil bones were thought to be lost but were rediscovered and now reside in Berlin.
His crucial publication was a handbook of anatomy first published in 1808. It was almost 700 pages length and contained detailed description of parts of the human body, including the brain, nervous system, lungs and reproductive tract. This was where the pharyngeal recess was first described. In addition to the fos-

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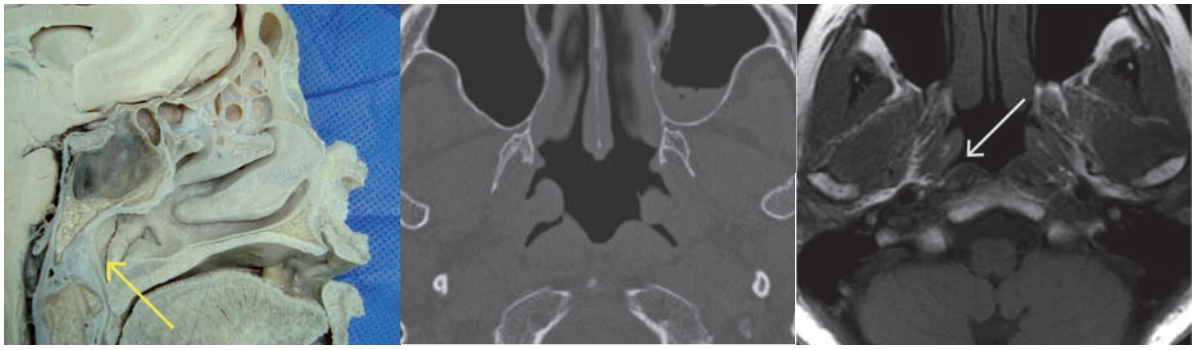
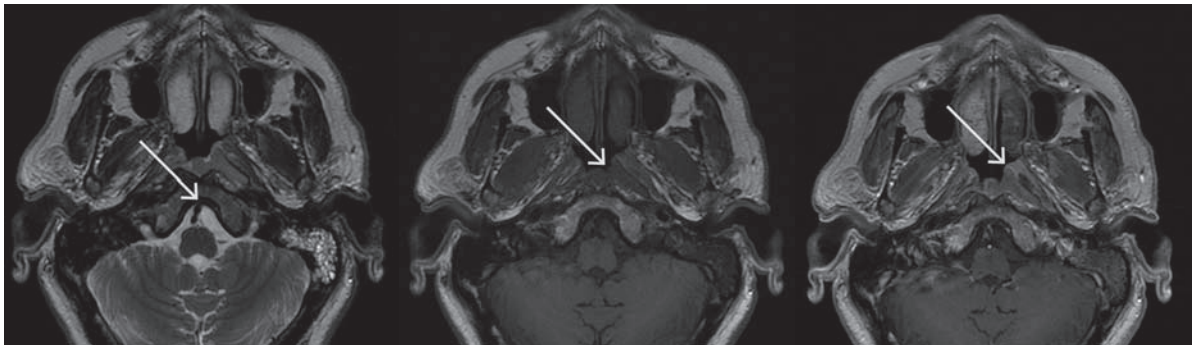


Figures 2, 3 and 4. This images show the fossa of Rosenmüller in a cavaderic specimen (sagittal view) and axial CT and MRI images.



Figures 5, 6 and 7. Axial MRI images T2, non-contrast T1 and post-contrast T1. There is a lesion, hyperintense on T2 and hypointense on T1, involving the left fossa of Rosenmüller. Notice its enhancement after administrating contrast material and also left serous otitis media.

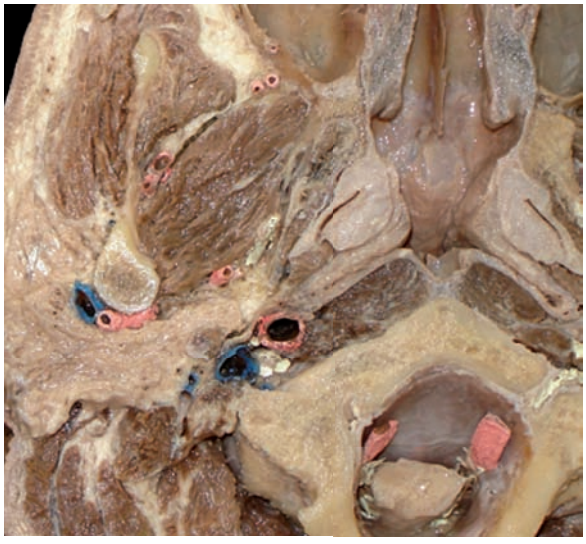


Figure 8. Caves. Original manuscript written by J.C. Rosenmüller in 1795. He also contributed to the study of Palaeobiology by the study of caves and fossils found in them.

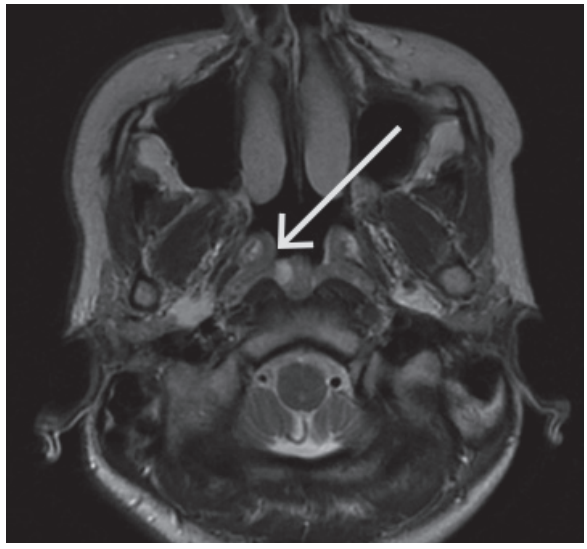


Figure 9. Axial MRI T2 image. Notice a small hyperintense and rounded lesion in intimate relation with the medial aspect of the fossa of Rosenmüller. This was interpreted as a pharyngeal retention cyst.

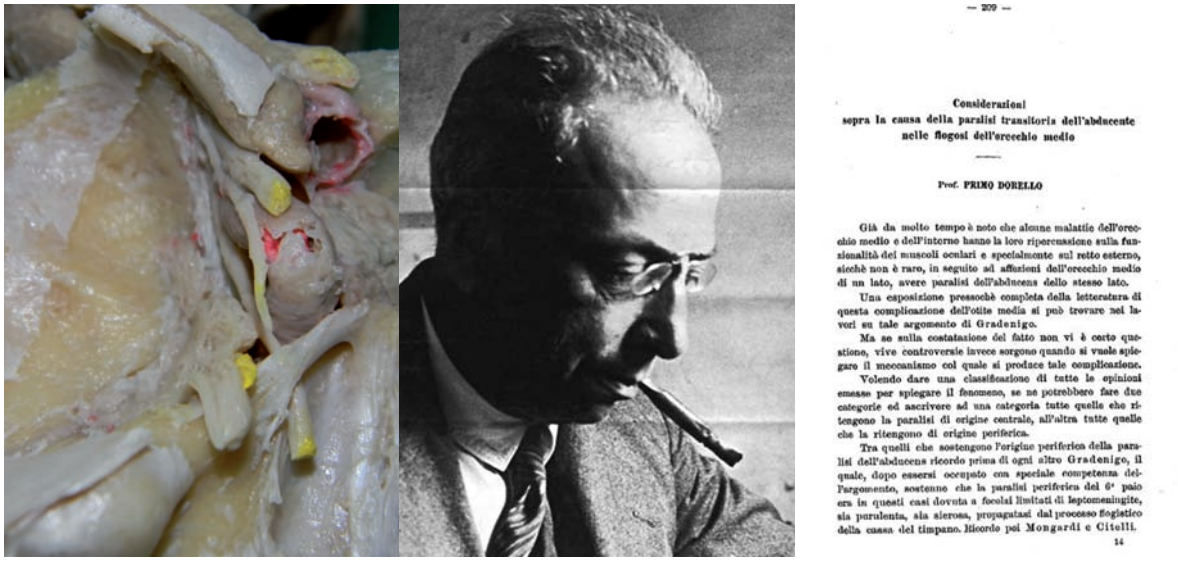
sa of Rosenmüller **(Figures 2, 3 and 4),** he also had described:

Rosenmüller´s gland: The palpebral portion of the lacrimal gland.

Rosenmüller´s organ: rudimentary structure located in the mesosalpinx. Consisting of a longitudinal duct (duct of Gartner) and 10 to 15 transverse ducts in the mesosalpinx between the ovary and the uterine tube. It is the remains of the upper portion of the mesonephros and is the homologue of the head of the epididymis in the male.

Among many pathologies, squamous cell carcinoma is the first malignancy to consider in case of involvement of Rosenmüller`s fossa **(Figures 5, 6 and 7).** It is always important to see the ipsilateral mastoid cells in order to look for an obstructive process in the middle ear associated with the primary tumor.

There are also benign lesions in this topography, that sometimes involved Rosenmüller`s Fossa such as pharyngeal retention cyst **(Figure 9).** These cysts turn out to be post-inflammatory, and tipically are para-midline.



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Considerazioni
sopra la causa della paralisi transitoria dell'abducente
nelle flogosi dell'orecchio medio

Prof. PRIMO DORELLO

Già da molto tempo è noto che alcune malattie dell'orecchio medio e dell'interno hanno la loro ripercussione sulla funzionalità dei muscoli oculari e specialmente sul retto esterno, sicchè non è raro, in seguito ad affezioni dell'orecchio medio di un lato, avere paralisi dell'abducens dello stesso lato.

Una esposizione pressochè completa della letteratura di questa complicazione dell'otite media si può trovare nei lavori su tale argomento di Gradenigo.

Ma se sulla costatazione del fatto non vi è certo questione, vive controversie invece sorgono quando si vuole spiegare il meccanismo col quale si produce tale complicazione.

Volendo dare una classificazione di tutte le opinioni emesse per spiegare il fenomeno, se ne potrebbero fare due categorie ed ascrivere ad una categoria tutte quelle che ritengono la paralisi di origine centrale, all'altra tutte quelle che la ritengono di origine periferica.

Tra quelli che sostengono l'origine periferica della paralisi dell'abducens ricordo prima di ogni altro Gradenigo, il quale, dopo essersi occupato con speciale competenza dell'argomento, sostenne che la paralisi periferica del 6° paio era in questi casi dovuta a focolai limitati di leptomeningite, sia purulenta, sia sierosa, propagatasi dal processo flogistico della cassa del timpano. Ricordo poi Mongardi e Citelli.

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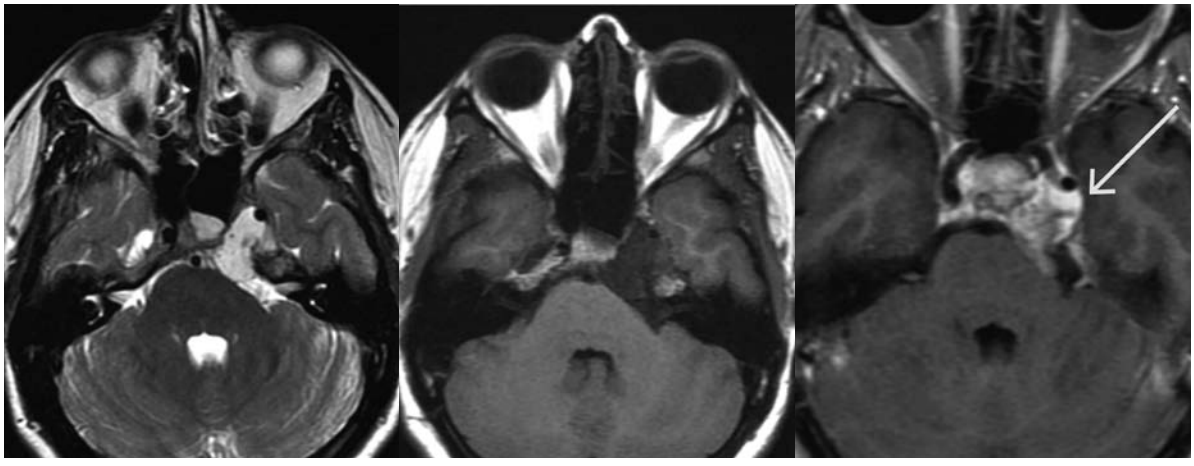
Figure 10. *Original manuscript written by Primo Dorello. It basically describes the anatomy of the petroclival region, highlinghting what we know nowadays as «Dorello´s canal»*



Figures 11, 12 and 13. *Axial T2 and T1 (pre and postcontrast) 56 years old male. MRI showed a lesion involving the left petroclival region. It is hyperintense on T2, due to cartilage component, hypointense on T1 and have avid enhancement with contrast. This corresponded to a chondrosarcoma.*

PRIMO DORELLO (1872-1963)

Primo Dorello was born in 1872 in Narni, Italy. He obtained his degree in Medicine and Surgery in Rome in 1897 and remained there as an Assistant Professor in the Department of Normal Human Anatomy.

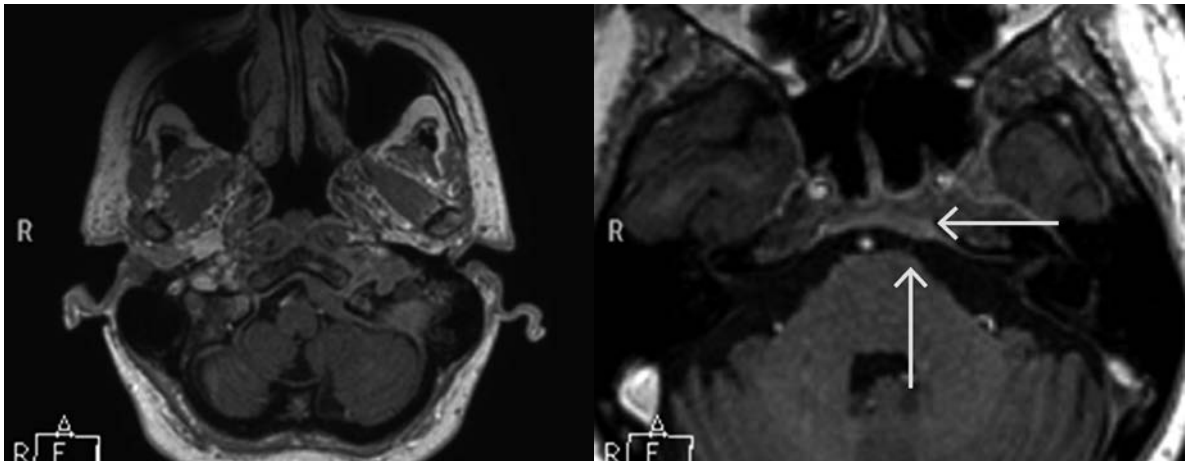
He published his paper *"Considerations on the cause of transient paralysis of the abducent in middle ear inflammation"* **(Figure 10).** That manuscript described a bony prominence at the petrous apex called the spinasphenoidalis. Medial to this structure is a depression in the sphenoid bone. The lateral side of this depression contains the petrosphenoidal suture and the medial side the clivus. This canal has a superior margin formed by the ligamentum petrosphenoidale. Although credited with the discovery of this canal, the first description of it was made by Wenzel Gruber in 1859. In 1939 was nominated for the Nobel of Medicine. He died in 1963.

The petroclival region is usually affected by neoplasms that have their origin in the adjacent regions such as the cavernous sinus, the pontocerebellar angle and the middle cranial fossa. Typically, the chondrosarcoma (Figures 11, 12 and 13) arises in this region due to existence of embryonal cartilage rests, endochondral bone and primitive mesenchymal meningeal cells.

There are other lesions which are not common and tend to invade Dorello´s canal by being locally infiltrative and aggressive. That´s the case of desmoid tumor **(Figures 14 and 15),** a really rare skull base lesion that consists of well differentiated fibrous tissue and normal appearing myofibroblasts.

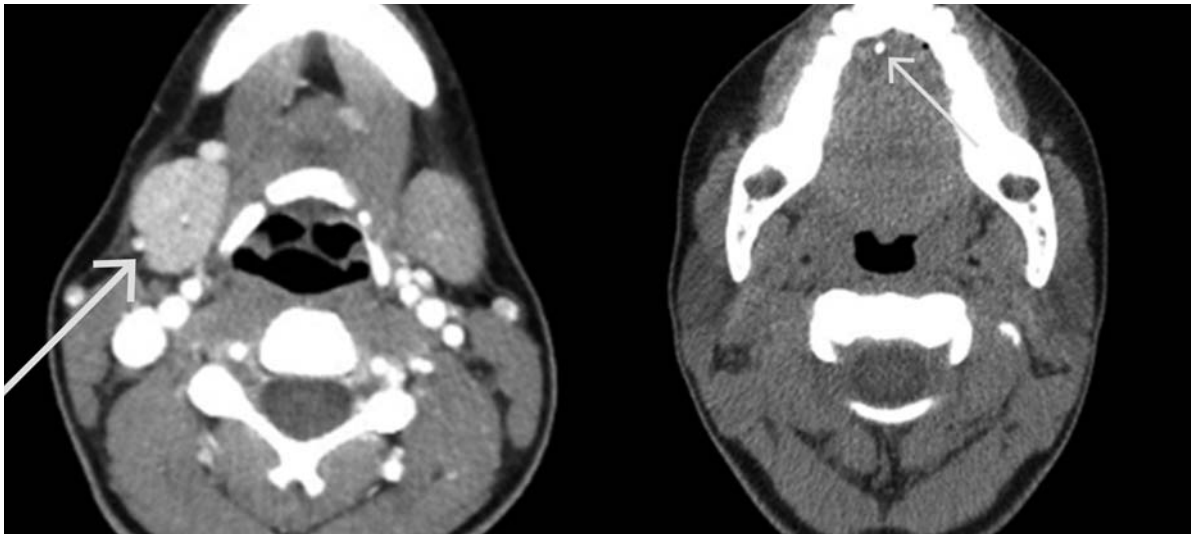
THOMAS WHARTON (1614-1673)

Thomas Wharton was born August 31st, 1614, at Winston-on-Tees, Durham, England.His boyhood and youth were passed in a period of continuous civil political and religious unrest.While at Oxford he did double duty, being both student and teacher.



Figures 14 and 15. *Post-contrast T1 axial images at the level of the skull base. 60 years old female with a history of Lymphoma. MRI showed a soft tissue involving the left side of the skull base, with encasement of multiple craneal nerves. On the left side, notice the involvement of the VI nerve towards Dorello´s canal. This case was path proven to be a desmoid tumor.*

Figure 16. *Thomas Wharton «Adenographia» gave an accurate description of the glands of the whole human body*



Figures 17 and 18. *Axial CT post-contrast and non-contrast. 42 years old male with right submandibular pain with no fever. The right submandibular gland is enlarged when compared to the left. In addition, there is pathologic enhancement of it. The superficial cervical fascia is thickened as well. In case of sialoadenitis is always important to look for an obstructive cause (look at the sialolith at the base of the frenulum).*

He began to practice Medicine in London, and the return to Oxford (1647) to receive his MD degree. In 1650, he became a Fellow of the Royal College of Physicians and in 1652 he received an honorary degree at Cambridge.

He published his *"Adenographia"* in 1656 **(Figure 16),** which immediately received great attention from medical men all over Europe. This book gave a more accurate description of the glands of the whole body than was formerly done. It is here that it is found the original description of the duct of the submandibular gland and, also, the so-called Wharton ´s jelly.Very little is seemed to be known of the personal life of Wharton.He built up a very extensive and successful practice in London.He married Jane and had three sons, two of whom died young. The other, Thomas, became a physician.The death of Thomas Wharton occurred in November 15th, 1673, and he was buried in the Church of St. Michael´s.

The sialoadenitis is a well-known condition that most frequently affects the submandibular gland. Radiologist must look for an obstructive cause along Wharton´s duct, being the majority of cases due to a sialolith **(Figures 17 and 18).** Another cause could be a squamous cell carcinoma of the floor of the mouth.

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(Fernando M. Ferraro)

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