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History

Laryngology in the mirror of its eponyms

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ABSTRACT

From a reading of various sources (scientific articles, books, dictionaries and websites), this article documents eponyms in the field of laryngology (other than those related to anatomy or therapeutics), memorializing certain notable events in this subspecialty of otorhinolaryngology and in the life of our illustrious forebears.

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1. Introduction

As the 19th century turned into the 20th, and the Napoleonic wars sank into the past, a revolt against dogma of whatever sort spread throughout Europe, transforming the spirit of research, hitherto dominated by empiricism. The anatomic-clinical concordance advocated by Claude Bernard sealed the fate of beliefs handed down from the Middle Ages, such as the theory of miasmas, refuted by Louis Pasteur. And it was also in this *Belle Époque* that laryngology was born in Vienna [1,2].

In otology, several articles [3,4] have inventoried the names left by the pioneers, these “eponyms”, from the Greek adjective ἑπώνυμος, *epi* (on) + *onoma* (name): one who gives their name, or the name thus given; but this remains to be done in laryngology. We seek here to meet this lack, although initial misnomers, multiple synonyms, the built-in obsolescence of any linguistic entity, community decisions to cease to honor a discoverer the rest of whose life turns out not to have lived up to the standards of their scientific accomplishments - take, for example, Wegener, whose eponymous disease was tactfully renamed “granulomatosis with polyangiitis” earlier this century -, and the rarefied atmosphere of medico-political polemics combine to condemn these historical honorifics to future obscurity [5].

By listing the eponyms of laryngology, apart from those concerning anatomy or therapeutics, and without attempting to be exhaustive—found in a variety of articles [1–4,6–25] and websites

[26–31], this article memorializes several notable events in the history of this branch of otorhinolaryngology and in the lives of our illustrious forebears (Table 1), to remind us, in the words of the philosopher Auguste Comte[32], that “One does not really know a science until one knows its history”.

2. Eponyms and clinical examination

Beyond a shadow of a doubt, the most important eponym in the history of laryngology is that of the Austrian pneumologist, geologist and balneotherapist, Konrad Clemens Clar— also known as Klar [6–8] – and the frontal mirror he designed in Vienna, with the help of the Rieni company, at a time when the eminent French surgeon Alfred Velpeau [9] deemed that, except in very particular cases, a finger was quite enough to examine the larynx. . . Marcel Lermoyez, on the other hand, wrote at the time: “This mirror is the best lighting device that has yet been used.” And he added: “The lighting obtained with the incandescent lamp is identical to sunlight. The focal distance can be adjusted at will by means of a hinge that sets the position of the lamp in front of the mirror. Vision is binocular, thanks to the two holes pierced at eye level. The frontal support frees both of the observer’s hands”, and: “Its size has the advantage of shielding the face against the patients’ spittle.” [8]. Combined to the laryngeal mirror, first manufactured for 6 Francs (at the going rate at the time) by the surgical instrument maker Charrière for the Spanish tenor Manuel Garcia, who had had the idea while strolling through the Palais Royal gardens in Paris one September afternoon in 1854, Clar’s frontal mirror triggered the development of laryngology [21]. This new instrumentation, however, got off to an uneasy start: when Garcia first presented what he called his “laryngoscope” before the Royal Society of Medicine

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Table 1
Alphabetic list of eponymous physicians in laryngeal pathology.

Eponym	Dates	Country
Abrikossov, Alexei	1875-1955	Russia
Ackerman, Lauren	1905-1993	USA
Arnold, Julius	1835-1915	Germany
Avellis, George	1864-1916	Germany
Balme, Claude	1742-1808	France
Clar, Konrad	1821-1902	Germany
Collet, Frédéric	1870-1966	France
Garcin, Raymond	1897-1971	France
Isambert, Emile	1862-1919	France
Jackson, Chevalier	1865-1958	USA
Jackson, John	1835-1911	Britain
Killian, Gustav	1860-1921	Germany
Quincke, Heinrich	1821-1902	Germany
Zenker, Friedrich	1825-1898	Germany
Tapia, Antonio	1875-1950	Spain
Sicard, Jean	1872-1929	France
Ortner, Norbert	1865-1935	Austria
Ziemssen, Hugo	1829-1902	Austria
Gerhardt, Karl	1803-1902	Austria
Reinke, Friedrich	1862-1919	Germany
Semon, Felix	1849-1921	Germany
Sicard, Jean	1872-1929	Germany
Virchow, Rudolph	1821-1902	Germany

in London in the Spring of 1855, it met with a less than enthusiastic reception, the honorable Society deeming it a mere physiological amusement of no real scientific value [10]. The laryngeal mirror also sparked off a particularly bitter quarrel between Ludwig Türck, Professor of Medicine in Vienna, and Johan Czermak, professor of Physiology in Pest, for the invention of indirect laryngoscopy. In 1858, Czermak published an article entitled “On the laryngeal mirror” in the Vienna Weekly Gazette which, unfortunately, failed to mention Türck’s prior experience in the matter, setting off a dispute celebrated as the “Türckenkrieg” which raged worldwide. Once Scellé, after a fully-fledged trial and the intervention of the French Académie des Sciences acknowledging the role of both protagonists, had jointly awarded them the Montyon Prize, worth 1,200 Francs in gold, for “perfecting medical science”, French and English translations of the works of both authors helped this major advance in medicine to rapidly find widespread application [2,22,27,28].

Three other clinical eponyms directly related to the advent of indirect mirror laryngoscopy are worthy of mention. The first is the Killian position [27,28], with the patient seated head stretched forward, which was adopted in indirect laryngoscopy using a mirror to improve intralaryngeal visualization, before fibrosopes came onto the scene. Its inventor, Gustav Killian, had taken his MD in 1885 in Strasbourg, which at that time was a German city following the Franco-Prussian War of 1875, and went on to become a Professor at the Charité Hospital in Berlin; he is also renowned for having developed, in 1912, the technique of suspension laryngoscopy, still used today [20]. The second is the “Chevalier Jackson” sign, named for the American otorhinolaryngologist, Professor at the University of Pittsburgh and considered one of the fathers of bronchoscopy [18]. His sign was rediscovered in the late 20th century by a French team, who renamed it the “rising tide sign” [19], consisting in salivary stasis observable on mirror laryngoscopy in the piriform sinuses in case of the diverticulum first described by Ludlow but from which the name of Friedrich Albert von Zenker has been inseparable since his publication of the first treatment series in 1877 [21]. Known and renowned for his discovery, in 1860, of the implication of trichinosis, caused by a parasite in pork meat, in certain acute and usually fatal abdominal syndromes, Zenker was also awarded the Montyon Prize by the Académie des Sciences in 1865, despite the tense state of Franco-Prussian relations at the time, as his discovery led to preventive measures that revolutionized the food industry, saving thousands of lives [27,28]. And, last

but not least, Arnold’s nerve cough reflex, triggered by mechanical stimulation of the auricular branch of the vagus nerve, when, for example, the otoscope comes into contact with the outer ear canal, was named for the German pathologist Julius Arnold, Professor and later Director of the University of Heidelberg Institute of Pathology. This sign is just one of a whole series of eponyms, including a well-known form of occipital cervical neuralgia, to which he and his brother, who was successively Professor of Anatomy in the Universities of Zurich, Fribourg, Tübingen and Heidelberg, gave their family name [27,28].

3. Eponyms and paralytic laryngeal pathologies

With the advent of indirect mirror laryngoscopy, forms of laryngeal immobility were revealed, and a number of eponyms became attached to the various clinical aspects or lesion associations.

Clinically, two eponyms still in use today designate bilateral laryngeal palsy. Ziemssen syndrome, named for the Professor of Pathology with whom Zenker founded one of the first German scientific medical journals, the *Deutsches Archiv für klinische Medizin*, is a form of bilateral laryngeal palsy in open position, causing aphonia and false passage, whereas Gerhardt syndrome, a form of bilateral vocal-fold palsy implicating the posterior cricoarytenoid muscles, associates dyspnea and laryngeal spasm without major dysphonia [27,28].

Eponyms are also numerous in paralytic associations. Collet–Sicard syndrome, named for two French physicians specializing respectively in ENT and radiology, is caused by combined cranial nerve IX, X and XI lesions, while Garcin syndrome, identified in the eponym’s MD thesis, is a form of progressive unilateral cranial nerve palsy associated with tumor extension in nasopharyngeal cancer, and Avellis syndrome combines laryngeal and velar paralysis, sometimes associated with Bernard–Horner syndrome and contralateral hemiplegia [27,28]. Three other paralytic syndromes are notable for their history or for their discoverer. The first, associating laryngeal and unilateral lingual palsy, was first reported, in a toreador called El Algabeno who had sustained a horn wound to the neck during a bullfight, by the Spanish otorhinolaryngologist Antonio Garcia–Tapia Hernandez. After taking part in the insurrection in the Philippines which set United States against Spain, he returned to civilian life and founded the “Societas Latina de Otorrinolaringologia” [16]. Ardent advocate of total laryngectomy, for which he modified the technique developed by Themistocles Glück, in 1922 he paid the rail-fare to Paris, where the World Congress of Otorhinolaryngology was being held, for a dozen patients who had undergone laryngectomy at his hands [29]. The second syndrome, named for “Jackson”, is induced by bulbar lesion and associates unilateral laryngeal palsy and palsy of the velar, lingual, sternocleidomastoid and trapezius muscles. John Jackson, a British neurologist and ophthalmologist – not to be confused with Chevalier Jackson – described the syndrome in one of his 300 articles. Another equally remarkable article concerned the focal epilepsy now known as “Jacksonian seizure” [27,28]. Looked down on by his compatriots at the time, but rediscovered by German neurologists, he is now considered the father of modern British neurology. The third syndrome is that of Ortner, physician to the Austro-Hungarian Emperor Frantz–Joseph, elevated to the aristocracy for helping with the embalming of his beloved Sovereign [27], who described onset of left inferior laryngeal nerve palsy secondary to left auricle hypertrophy.

No round-up of eponymous laryngeal palsies would be complete without the name of the physician who, in 1892, wrote the first review of the literature on unilateral laryngeal paralysis [12] and gave his name to a series of laws, now fallen into disuse, meant to explain the position of the larynx after unilateral laryngeal palsy

according to the anatomic lesion site. Felix Semon (for he it is) was the son of a stockbroker; he began his medical studies in Heidelberg, but interrupted them in 1870 to volunteer in the Franco-Prussian War where, being an accomplished musician, he composed a march that his regiment played to celebrate their victorious return, and then completed them in 1874 in Berlin, where he studied under Rudolph Virchow [13]. A training tour took him to Vienna, Paris and then London, where he settled, speaking and writing German, English and French fluently, and joined the Hospital for Diseases of the Throat founded by Morell Mackenzie, whose “Diseases of the Throat and the Nose” – the bible of its time – he translated into German, before their relationship soured due to his mentor’s unfortunate opinions on the treatment of the German Crown Prince’s disease [13]. He was the first laryngologist to be named Fellow of the Royal College of Physicians, and married Augusta Redeker, one of the most famous contraltos of the day, who opened to him the doors of British “society”. He founded the London Laryngological Society, and was appointed Royal Prussian Professor by the German Emperor and physician to the British King Edward VII, whose hunting partner he was and who bestowed on him a knighthood in 1897 [13]. He was an ardent defender of laryngology, which he argued should be a discipline in itself, independent of otology, at a time when a British physician might pillory the laryngologist as “The man that could not make an income unless his patients continued to pay him needless visits”, with treatment consisting in no more than pulverizing and applying any of a variety of powders. Semon was not afraid of making enemies: at an international congress in Copenhagen, one of his friends proposed a toast to him as “the best-hated laryngologist” [13].

4. Eponyms and inflammatory, infectious, and laryngeal tumoral pathologies

When laryngology emerged at the turn of the 20th century, Armand Trousseau had grouped laryngeal pathologies, including tuberculosis and diphtheria, together under the term “phthisis”, a wasting disease with fatal outcome.

The origin of the “Red Death” would remain a mystery until the discovery of *Mycobacterium Tuberculosis* by Robert Köch in 1882. The impossibility of overcoming this infection accounts for the pessimistic tone of Emile Isambert in his “*Maladies du larynx*” [24]. Son of a lawyer and left-wing politician, he began his studies at the age of 23 after first working as a diplomat. Appointed Professor of Medicine in 1866, he was also a geographer, and one of the founders of the precursor to the present European Annals of Otorhinolaryngology Head & Neck Diseases, the *Annales des Maladies des Oreilles et du Larynx* [24]. He also opened the first laryngology consultation in Paris, in the premises of the General Medicine Department of the Lariboisière Hospital. And he was the first in France to detail the various forms of laryngeal tuberculosis, including Isambert’s disease characterized by light gray granulation and infiltrated laryngeal mucosa in the acute phase [24].

The other catastrophic infection confronting the new discipline of laryngology was diphtheria. This disease had been recognized since Antiquity, as was given the Scots name “croup” by Francis Home in 1765. It afflicted thousands of patients per year in France, 20% of whom would die of it, including Napoléon-Charles, nephew of Napoléon Bonaparte [14–31]. Deeply affected by his loss, the Emperor offered a reward of 12,000 Francs to whoever could succeed in treating this scourge [14,31].

Just as dangerous, but not involving infection, was Quincke’s edema, now known as hereditary angioedema, caused by complement C1 inhibitor deficiency. Quincke was one of the greatest German physicians, nominated several times for the Nobel Prize for Medicine and adored by his patients, who called him “Uncle

Doctor”. He was more than willing to ask his students and younger colleagues for their opinions on the studies he had published, and was known for his charmingly compulsive habit of meticulously disinfecting his nostrils with antiseptic every day [23].

Some other “infectious” eponyms have fallen out of use, such as “Balme’s cough” (a nasopharyngeal obstruction arising during a common cold), “Chevalier Jackson’s disease” (acute laryngotracheobronchitis causing dyspnea), or “Reinke’s edema” (pseudomyxomatous laryngitis) [18,26,27]. Balme managed to avoid any particular reputation, but Reinke’s teaching career was disturbed by conflict with his superiors, who gave priority to research over education, and Chevalier Jackson was notorious for his misogyny [27].

Tumors gave few laryngological eponyms. However several of our illustrious forebears already mentioned above gave their names to various elements of tumoral pathology. Semon’s sign has fallen into disuse, but referred to impaired vocal-fold mobility in the early stages of laryngeal cancer [27]. Equally outdated, Chevalier Jackson’s ulcer was the mucosal lesion sometimes found in the vocal apophysis of the arytenoid cartilage, induced by gastroesophageal reflux [27]. Abrikossoff’s tumor refers to a benign proliferation mainly developing in the posterior part of the larynx, now known as granulosa cell tumor. Ackerman’s tumor refers to verrucous carcinoma, which was what killed off Crown Prince Friedrich of Prussia despite the many biopsies performed by Morell Mackenzie and reinterpreted by Rudolph Virchow, leading to an almighty clash between German and British doctors, with seismic reverberations [2,21,27]. Virchow, the father of cell theory and considered to be the most important German physician of the 19th century, was born in Pomerania in a small-farming family; with a scholarship grant from the army, he studied medicine in Berlin, where he began teaching pathology in 1847 [27,30]. In the same year, dissatisfied with publishers who kept rejecting his submissions, he founded the forerunner of today’s *Virchow’s Archives*, which quickly established itself as the best medical journal of the time [27,30]. In 1848, he was dispatched by the government to fight a typhus epidemic that had broken out in Silesia; on his return, his recommendations were: political freedom, economic reform and education [27,30]. Following the 1848 revolutions, where he had helped build the barricades, he campaigned for the reform of medical studies and the abolition of the various grades given to physicians and surgeons—for which he was suspended from all academic activity in March 1849; the suspension was lifted a fortnight after protests by students and staff, but the loss of a number of financial privileges was maintained [27,30]. He nevertheless gained the first chair in pathology in Germany and, with personal backing from the Emperor himself, was nominated Professor of Anatomy, General Pathology and Therapeutics in the University of Berlin. Among his students, one may cite Langerhans, Recklinghausen and Osler. Having become son-in-law to the mayor of Berlin and a city counsellor, Virchow promoted numerous social policies, such as improving the city’s water supply network [27,30]. In 1861, he was a Member of the Lower Chamber of Prussia and later had a seat in the Reichstag, where he was one of the opponents of Bismarck’s rearmament policy [27,30]. This provoked the Chancellor to challenge him to a dual—an invitation he politely declined [27]. He received many distinctions worldwide, including Commander of the French Legion of Honor. Fascinated by anthropology, he joined Heinrich Schliemann in the excavations at Troy [27,30]. Among his eminently quotable statements, let us cite “Medical education does not exist to provide student with a way of making a living, but to ensure the health of the community”, or “The physicians surely are the natural advocates of the poor and the social problem largely falls within their scope” [27]. The eponymous Virchow’s corditis, however, has long ceded its name to hypertrophic corditis. . .

Disclosure of interest

The authors declare that they have no competing interest.

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