Editorial: From the ear to the larynx.

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If 2022 was the year of the cochlea, both for the bicentenary of the birth of Alfonso Corti[1] and the 100th anniversary of the invention of the audiometer in 1922, we believe 2023 should be dedicated to the larynx and voice rehabilitation.

In the eighteenth century, and during the first half of the nineteenth century, numerous observations were dedicated to understanding the functioning mechanism of the larynx and the voice. Experiments were made with animal or cadaver larynx and artificial models were built to simulate mechanically the sounds of the voice for educational purposes - such as those of Antoine Ferrier (1693-1769) and Johannes Peter Müller (1801-1858). Soon the need to know the physiological mechanism of voice and speech, as well as many other aspects of Science and Technology, left the university classrooms and was not the exclusive prerogative of scientists and insiders but was a requirement of wider layers of the population under the influence of Positivism. On May 31, 1867, Giacinto Namias (1810-1874), illustrious hospital chief in Venice, held a popular conference dedicated to the voice at the Ateneo Veneto[2].

One hundred fifty years ago, Billroth performed the first total laryngectomy. Christian Albert Theodor Billroth (26 April 1829 - 6 February 1894) was a German surgeon who performed numerous different types of surgeries (rectal surgery, esophagectomy, gastrectomy and also with anastomosing the lesser curvature to the duodenum). In 1873, he performed the first total laryngectomy for a laryngeal cancer. Since then, it became the treatment of choice for tumors of the larynx.

In the following years, many other surgeons performed the same operation. Among the Italians were Enrico Bottini (1835-1903) who was the first to carry it in Italy in 1875, Azzio Caselli (1847-1898), Giacomo Filippo Novaro (1843-1934) and Francesco Durante (1844-1934).

In the following decades several conservative treatments have been proposed for more limited laryngeal cancers and more recently not surgical treatments have been proposed in order to preserve the larynx that represents a fundamental organ in order to allow a good quality of life. The larynx is a very complex organ allowing us to communicate as it produces human voice, to eat as, through its sphincteric function, it allows us to assume food and liquids avoiding inhalation, and to breathe allowing us to live.

Billroth's assistant, Carl Gussenbauer (1842-1903) in 1874 also proposed the first artificial larynx, effectively realizing an aspiration of medical science.

Since that time, there have been many attempts to develop an artificial larynx which will be an important solution that can dramatically change the laryngectomized patient's life conditions. The cover of this issue is dedicated to this topic as well as an article resulting from the collaboration of various Italian research centers that are part of the inter-university consortium Consorzio Istituto Nazionale di Ricerche in Foniatria "G.Bartalena" and the BioRobotics Institute - Depart-

[1] Mira E., Martini A., Mazzarello P., Mudry A. (2023) "Alfonso Corti and the discovery of the hearing organ: the man, his life, his works " Audiologia e Foniatria, 8(1), 43-59. DOI: 10.14658/pupj-IJAP-2023-1-6

[2] Cozza, A., Martini, A. The Venetian Giacinto Namias and the explanation of how the voice works. An example of scientific dissemination in the field of Italian medicine in the second half of the nineteenth century Medicina Historica, 2023, 7(2), e2023039

ment of Excellence in Robotics & AI, Scuola Superiore Sant'Anna of Pisa (Italy)[3]. In this issue one paper is dedicated to dysphagia during long-Covid-19[4] , another paper focused on the effects of prolonged use of face masks on vocal emission[5] and a paper is dedicated to the development of Phoniatrics in Padova.[6]

[3] Marchese MR, Nacci A, Paludetti G, Ursino F, Galli J, Berrettini S, Barillari MR, Fracchia L , Ceresa C, Carmagnola I, Cassa MA, Chiono V, Ciardelli G, Pozzi J, Conte A, Maselli M. Artificial larynx, myth or reality? *Audiologia e Foniatria,* 8(2), 9-15.

[4] Caragli V. et al. Long-Covid-19 Dysphagia: proposal of a standardized evaluation protocol and disease description. *Audiologia e Foniatria,* 8(2), 25-35.

[5] Natale E.. et al. Impact of masks on voice in COVID-19 era: a vocal hygiene protocol to reduce voice fatigue in a population of speech therapists. (A proposal by G.I.Vo.C.) *Audiologia e Foniatria,* 8(2), 16-24.

[6] The origin of Phoniatrics in Padua: interview to Mario Rossi. *Audiologia e Foniatria*, 8(2), 55-59.