

Medicine in philately: Rene T. H. Laënnec, the father of stethoscope

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Introduction

The word stethoscope is derived from the two Greek words, stethos (chest) and scopos (examination). Since mankind first began to study human physiology and the physical characteristics associated with various ailments, it has been obvious that the heart plays a crucial role in our bodies. The sounds the heart and surrounding organs, such as the lungs, make can be crucial indicators when examining a patient (1).

The first stethoscope was invented in 1816 by a young French physician named Rene Théophile-Hyacinthe Laënnec (1).

Early years

René-Théophile-Hyacinthe Laënnec (1781–1826) was born in Quimper, Brittany. He studied medicine in Paris under several famous physicians, including Dupuytren and Jean-Nicolas Corvisart-Desmarests. In 1795, at the age of 14, Laënnec was already helping in caring for the sick and wounded at the Hôtel Dieu in Nantes. Laënnec was appointed the surgeon at the Hôtel Dieu in Nantes in June 1799 at the age of 18. In 1800, Laënnec went to Paris and entered the École Pratique in Paris to study dissection in Guillaume Dupuytren's (1777–1835) laboratory, which was where macroscopic pathology in surgery and the concept of disease and its comparison with anatomical conditions were introduced. Moreover, he served as the editor of the Journal de Médecine (2).

While France was at war (1812–1813), Laënnec took charge of the wards in the Salpêtrière hospital that was reserved for wounded Breton soldiers. After the monarchy's return in 1816, Laënnec finally was offered and gladly accepted the position as a physician at the Necker Hospital in Paris, wherein his most important contribution to medicine would be realized (3).

Percussion of the chest was regularly used during the 18th century to reveal various sounds and to help outline enlarged

organs or lesions in the chest. This method was invented by Leopold Auenbrugger of Vienna. However, his work on percussion was largely ignored until the early 1800s when Laënnec adopted and improved it (4).

Discovery of the stethoscope

One day, in the fall of 1816, Laënnec was scheduled to examine a young woman who had been laboring under general symptoms of a diseased heart. Laënnec needed to listen to the woman's chest. As the patient was somewhat overweight, Laënnec considered it both improper and inadequate to place his head on her chest and directly listen. He rolled up a sheet of paper into a tube and placed one end on the patient's chest. The tube magnified the sound, and Laënnec found that he could easily hear her lung sounds by putting his ear to the open end. The rolled up piece of paper was soon replaced by a hollow wooden tube (5).

He initially termed the device as "chest examiner." He struggled to find a name for his invention, discarding names such as "sonometer," "medical cornet," and "pectrolique." He particularly disliked his uncle's selection of "thoraciscope." Finally, he selected stethoscope, which literally meant "I look into the chest" in Greek. (6) (Fig. 1).

He became the first physician to reliably distinguish among bronchiectasis, emphysema, pneumothorax, lung abscess, hemorrhagic pleurisy, and pulmonary infarcts. He also opened the door to our modern understanding of cardiac maladies by describing their associated heart sounds and various murmurs (5).

On August 19, 1819, when Laënnec's magnum opus on the stethoscope, *De l'Auscultation Médiate*, was published, the two-volume book hardly caused a stir in the medical world (6).

This success, combined with the gradual acceptance of the stethoscope by practicing physicians, enabled Laënnec to revolutionize clinical medicine (7).

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Figure 1. A stamp published in Czechoslovakia in 1952 showing a physician with a stethoscope during his clinical examination

Furthermore, he developed the understanding of peritonitis and cirrhosis. Although cirrhosis was known, Laënnec gave cirrhosis its name, using the Greek word (kirrhos, tawny) that referred to the tawny, yellow nodules that are characteristic of the disease (8) (Fig. 2).

Personal life

Laënnec was intensely religious and was a devout Catholic all his life. He was also known by his shy character, and it was his shyness that led to the innovation of the stethoscope because he felt quite uncomfortable, particularly while diagnosing young women by placing his ear on their chest (6).

In August 1824, he was made a chevalier of the Legion of Honor. Laënnec married Ms. Argon in 1824, just 2 years before his untimely death at the age of 45 years. He had no children. Laënnec's health deteriorated, and he progressively grew weaker because of tuberculosis in 1826 (8).

Laënnec died at Kerlouanec on August 13, 1826 at the age of 45 (9).

Known as the father of clinical auscultation, René Laënnec is considered to be one of the greatest doctors of all times.

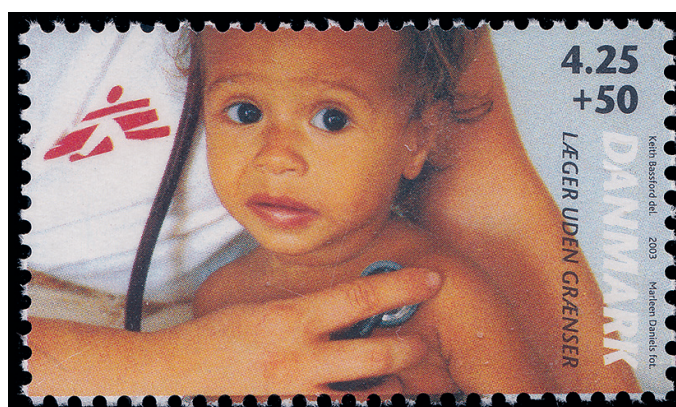


Figure 2. A stamp issued in Denmark in 2003 by the Association of Doctors without Borders showing the symbol of stethoscope

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Impressions from the PCR İstanbul Peripheral

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Peripheral artery disease can now be identified as a pandemic (1), with its growing global burden and its estimated prevalence of more than 202 million in 2010 (2). As a result of the diffuse nature of atherosclerosis, there is a large overlap between patients with coronary artery disease. Patients in these two groups share similar risk profiles, and therefore, benefit from similar medical interventions. With regard to treatment, peripheral interventions, which share the same universal fundamentals with coronary interventions, have succeeded surgical revascularization as the primary revascularization approach over the last few decades (3, 4). Therefore, peripheral vascular disease appeared to be the next frontier of interest for interventional cardiologists, which led to the yearly PCR İstanbul Peripheral course, thereby forming a new section of prestigious PCR meetings, a programme which is "crafted by and for cardiologists." This course comprises an array of objectives, including reviewing patient selection and indications for peripheral interventions; highlighting technical differences and similarities between coronary, structural, and peripheral procedures; familiarizing with new tools and devices; facilitating the adaption and application of interventional cardiology skills in peripheral arteries; and discussing strategies, techniques, and methods of preventing and managing potential complications.

This year, we were privileged to host the second international meeting for interventional cardiologists, following the EuroCTO in İstanbul. Despite the experiences we gained from previously hosting three national meetings, this course warranted a larger amount of effort, preparation, and organization. A team, including Prof. William Wijns, and the course directors Professors Alberto Cremonesi, Ömer Göktekin, and Thomas Zeller worked hard to make this meeting possible. The key note speech was also delivered by Prof. Wijns. The faculty encompassed 69 experts in the field who presented and



Figure 1. Prof. Göktekin during the closing speech

discussed pivotal topics in peripheral interventions. Live cases were transmitted from the Bezmialem University Hospital and constituted an essential and highly educational component of the meeting. Prior to the case presentations, operators presented their strategies planned for the case and the important key points they extracted. A total of 13 live cases, covering a myriad of diseases, including carotid, subclavian, peripheral chronic total occlusions, visceral, and abdominal aortic aneurysms, were performed throughout the live case sessions. During these sessions, a panel of experts discussed the selection of equipment and techniques and was later concluded with some essential take home messages.

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Figure 2. Preparatory meetings held prior to the live cases session, where cases were reviewed and strategies were discussed to ensure everything ran smoothly. From left to right Drs. Ertan Vuruskan, Alberto Cremonesi, William Wijns and Antoine Sauget



Figure 3. A group photo of some of the members of the faculty, following the "feedback" meeting after the congress

A total of 417 participants attended the congress this year, and we were thrilled with the participants' turnout and enthusiasm towards the meetings, as this is a great measure of success of the congress. It was remarkable to receive countless feedback from our international audience reporting their

great satisfaction with the rich content of the meeting. We are firm believers that this interest will inevitably increase over the following years. For interventionalists who attended the congress and likewise to those who could not, we recommend that they visit the PCR website, www.pcristanbulperipheral.com.

com and www.pcronline.com, for accessing uploaded presentations and recorded cases.

As the Turkish Society of Cardiology, we organized a “best case” session with the national interventionalists before the opening ceremony of the congress. Overall, 73 cases were submitted, which were subsequently reduced to 23 by the board of the Turkish Society of Cardiology. These cases were later presented during the morning session, where the top three cases were chosen by the participants’ votes. These cases will be available to read in a following issue of the Anatolian Journal of Cardiology.

Finally, among all this, we would like to, once again, thank the course directors, faculty, operators, and attendants all of whom helped make this congress a great success. We greatly appreciate any comments or suggestions you may have, all of which will be taken into account for the forthcoming meetings. We hope to see you all at the next PCR İstanbul Peripheral.

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