

The Stethoscope at the Age of 200: Will “He” Survive?

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In February 1816, Dr René-Théophile-Hyacinthe Laennec was looking, near Louvre in Paris, some children playing (1). One scratched with a needle at the end of a beam and another listened, with the ear put on the other end of the beam, the sounds produced by the first. Turning back to the Necker Hospital, where he worked, he took a piece of paper, twisted it and put it with one end on the chest of a cardiac women and listened on the other end. The sounds of the heart were very clear, as well the respiratory sounds. Laennec built very quickly a tube of wood and communicated his invention on February 17, 1816, under the name of „**sthetos scope**”, from the greek word „**sthetos**” – means chest

and „**scope**” – to see. He presumed that in this way he could „see” indirectly into the chest. This was the birthday of the stethoscope (1).

In the next 2 months (!) Laennec described practically all the auscultatory semiology of the respiratory system, which is valid today as well. And 10 years later he died of tuberculosis, at the age of 45...

Now his invention is 200 years old. At this venerable age, he has to resist to many attacks coming from the descendants of his father, the doctors of this century (2-4). Their main argument is that the stethoscope does not give any information about the most important and dangerous cardiac structural and functional modifications. By contrast, the small ultrasound machines, as great as a tablet or less describe in detail the morphology and the function of the heart. Some introduced already training to use this examination even from the undergraduate period of medical learning (3,4). The cost of such machines is lower and lower and any medical office can afford today to have such an instrument.

The problem with these point of care ultrasound is that they can be useful for the general practice, allowing to recognize elementary abnormalities, but this instrument is totally operator dependent and there are at least three levels of competence in using ultrasound diagnosis. If you are trained for the first level –

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Article received on the 25th of March 2016. Article accepted on the 30th of March 2016.

as some claim to do this for undergraduate training (3,4) – you may miss important diagnosis put only by the second level of competence and this could be disastrous in an emergency patient.

The most elegant advocate of the major role of physical examination and, thus, of the stethoscope is Valentin Fuster (5). In his paper he gave 6 examples of his clinical activity of the last only 48 hours (!) in which the ultrasound missed information given by the stethoscope. He put himself and to us a question (5): „Let me ask you a question: what if a physician comes upon a sick person in the street and has not received the proper training for a physical examination? Does she or he have to abandon that sick individual? We cannot teach our medical students to become reliant upon advanced technologies without which they become useless”.

Indeed, we cannot imagine a doctor who cannot do anything for his patient without a machine. Old, but eternal medicine says that the doctor should interact with his patient by

inspection, palpation, percussion, auscultation, and olfaction (5) and, most of all, by much attention in the direct discussion with him or her. The stethoscope is an important simple instrument to examine the heart, the lungs, the vessels, the abdomen, to measure blood pressure. During all these moments the patient feels that he interacts with his/her doctor and trusts him or her. We know how enormously important is to trust your doctor in the process of healing.

We should mix the new technology with classical medical skills and it is most important to practice both solidly in order to perform a solid medicine (6). Today you cannot imagine a doctor without knowledge to apply medical technology. But it is equally important to use it by the filter of clinical exam.

Let us finish with the words of the great master Valentin Fuster (5): at the age of 200 „the Stethoscope’s prognosis very much alive and very necessary.”

Conflict of interests: none declared.

Financial support: none declared.

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