AN EARLY MENTION OF THE STETHOSCOPE (LOCOCK 1821)

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THROUGH THE VIGILANCE of its splendid staff and with the help of the Friends of the Rare Book Room, the Library of The New York Academy of Medicine recently obtained a scarce item that contains a notable early mention of the stethoscope. This volume, a slender octavo of 42 pages, is a thesis by Charles Locock titled *Dissertatio Medica Inauguralis de Cordis Palpitatione* (Inaugural Medical Dissertation on Palpitation of the Heart), Edinburgh, P. Neill, 1821. Herewith follows a translation of pages 32 to 34 of the thesis, in which the use of Laennec's new instrument is briefly discussed.

EXCERPT FROM LOCOCK'S THESIS

When the valves of the heart become ossified (as Doctor Laennac* [*sic*] has reported), this can be readily recognized through the *Stethescope*,** which transmits a sound like that of purring cats.† If the hand is placed over the precordium the same sensation is perceived.

Doctor Ferriar has taught that in enlargement of the heart the epigastric pulsation is very different from ordinary palpitation. In the former the heart is felt "giving a jarring sensation, the stroke seeming restrained, and succeeded by a kind of thrilling." Burns has a different opinion. He says the signs are distress in the chest, and thereafter a sensation of asphyxia; a full, slow, and soft pulse, which in one case was as slow as eleven beats in the 60th part of an hour, the cardiac contractions being slow but regular.

Laennac [*sic*] in his description of the same malady, as it appears, under the heading of passive dilatation, says that when it affects the left ventricle the pulse is weak and soft; the heart beats insufficiently

*Laennac [*sic*] is cited not at first hand but in the review of his book in *Johnson's Medico-Chirurgical Journal,* vol. 2 [footnote by Locock].

**This spelling is common in the earliest descriptions. The presently accepted spelling, stethoscope, is closer to the Greek *stéthos,* chest.

†Locock's expression *sono quasi felium blandentium* is a clever equivalent of Laennec'c *frémissement cataire.*

and often its action is not palpable. The sound as perceived through the Stethescope is loud and clear, if the cylinder is applied to the region of the apex. In such cases he noted that the jugular veins are engorged.

If the dilatation is in the right ventricle similar signs are present but the sound is referred predominantly to the sternum.

Simple hypertrophy, or active aneurysm of the heart, is rare without enlargement. When the left ventricle is affected in this way, if the Stethescope is applied between the fifth and sixth ribs the contractions are perceived as if very strong but with a weaker sound than when the parts are healthy. The contraction of the auricles is very short and not loud. The reverberation of the heart is audible only in a very limited area. In this disease, also, the patient constantly feels that the action of his heart is increased but palpitations occur only in paroxysms, the malady being more or less in abeyance during the intervals. In simple hypertrophy intermission and irregularity of the pulses are often absent. When hypertrophy occurs in the right ventricle there is greater oppression of the chest in breathing, the color of the face is more livid, and the external jugular veins pulsate. Through the Stethescope the pulsation of the heart sounds louder over the lower sternum than over the ribs.

In active aneurysm of the heart—enlargement of the ventricles with thickening of the walls—which occurs rather often, the signs apparently are produced from all these sources. The contraction of the ventricles creates a strong impulse and produces a loud sound in the Stethescope. The contraction of the auricles is distinctly loud. The pulsation can be heard widely over the chest, especially in children and thin people. The pulsation moreover is usually so strong that it shakes the garments and the bedspread, but at the wrist it is often quite small. When the chest is percussed it yields a sound greatly different from the normal.

With regard to diagnosis much is still lacking at present, and more information must be acquired in the future. It is often more difficult to differentiate the various lesions of the heart from one another than to segregate them from the signs of common palpitation. . . .

Comment on Locock's Thesis

Sir Charles Locock, Bart., M.D., D.C.L., F.R.S. (1799-1875) was one of those meritorious physicians who lead a useful professional life

and attain eminence without having contributed extensively to the literature. After taking his doctorate at Edinburgh he came to London, where his ability won him the sponsorship of an influential older physician. Relatively early in his career he became a physician to the Westminster General Lying-In Hospital and Fellow of the Royal College of Physicians. By the advice of Sir James Clark, who is remembered *inter alia* for having been the physician of John Keats,[1] he was made physician-accoucheur to the queen. In 1857 he was elected president of the Royal Society of London. His limited writings consisted chiefly of articles on gynecology in the *Cyclopaedia of Practical Medicine.*

Locock's thesis is dedicated to his teacher Dr. Andrew Duncan, Jr. (1773-1832), a widely traveled and highly esteemed physician who held professorships of materia medica and medical jurisprudence at Edinburgh. Duncan is famed for his isolation of cinchonin, which has been credited with paving the way for the discovery of the other alkaloids.[2] He is believed also to have been among the very first physicians in the British Isles to use auscultation.

Locock's Latin prose is clear and simple—much clearer and simpler than the German medical prose which afflicts students of the 19th-century medical literature. A degree of ingenuity is apparent in the adaptation of Latin to the new medical vocabulary.

Locock honorably admits that he has not seen Laennec's book but knows of it only at second hand, through a review in Johnson's *Medico-Chirurgical Journal.*[3]

Locock follows Laennec and, indirectly, Corvisart, in distinguishing between passive dilatation of the ventricles (*dilatatio passiva*, also called passive aneurysm) and active aneurysm or simple hypertrophy (*hypertrophia simplex vel aneurisma cordis activum*). He reproduces some of Laennec's not too successful efforts to cope with the origin and significance of the heart sounds, such as the idea that auricular tones and ventricular tones are heard alternately and that in simple hypertrophy the auricular sound is very brief.

Almost at the very end of the discussion of auscultation Locock briefly refers to percussion. This arrangement was usual at the time. It reflects the fact that Auenbrugger's percussion was little used in England until the acceptance of mediate auscultation carried both percussion and auscultation into daily use by the practitioner.

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