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Sample Conundrum of Digitalis Experiences (1848)

Authors who have written concerning the effects of digitalis on the organs of circulation, speak of the difference between the pulse, as observed in different positions, as an inexplicable anomaly, and seem quite ignorant that a similar phenomenon occurs in a less degree in health, and in an equal degree in many diseases. The fact appears to be, that digitalis, besides a great and debilitating influence on the whole constitution, and particularly the nervous system, possesses a peculiar power of diminishing the frequency of the pulse; but it is no anomaly that, in persons under its influence, debilitated, and nervous as they always are, when it is exhibited in doses sufficient to retard the pulse, there should be a great difference between the frequency of the pulse as examined in the horizontal, the sitting, and the erect postures. —Robert J. Graves: Clinical Lectures on the Practice of Medicine, ed. 2, vol. 1. Dublin, Fannin and Co., 1848, p. 50.
Minuscule Review


The authors described the clinical and laboratory findings in four patients with the unusual combination of tricuspid insufficiency from rheumatic heart disease and protein-losing enteropathy, lymphocytopenia, and immunologic deficiency. Studies with intravenous $^{51}$Cr-albumin revealed a gastrointestinal loss of albumin two to six times that of the control normal values. Absolute lymphocyte counts were all below the lowest value of 42 healthy controls and 48 controls with left-sided heart disease. Furthermore, lymphocyte counts of 30 patients with either tricuspid insufficiency or chronic constrictive pericarditis were significantly less than those from healthy controls but rose appreciably after successful surgery. In the four patients, delayed hypersensitivity was depressed when tested with a variety of antigens and in one patient a skin allograft was retained until death 57 days later. The authors postulated that the venous congestion of the gut caused a loss of protein and lymphocyte-rich fluid from the lymphatics into the intestine much like that which occurs in primary intestinal lymphangiectasia and that this in turn was responsible for the immunologic deficiency.

Comments. In this age of specialization, it is encouraging to see a coordinated investigation of a disease involving two major systems. The well-developed syndrome described by the authors must be rare, as hypoalbuminemia and other changes on serum protein electrophoresis, despite chronic hepatic venous congestion, are uncommon in patients with tricuspid insufficiency. The mild lymphopenia should be the best lead to occult enteropathy for those who are interested in looking for this phenomenon. The relationship of the enteropathy and the lymphocytopenia to the tricuspid insufficiency is well confirmed by the improvement in these abnormalities after surgery, but the nature of the immunologic deficit is not quite so certain. A variety of chronic illnesses, including chronic liver disease, has been associated with reduction in delayed hypersensitivity reactions and retention of allografts without any obvious immunologic deficit. It is possible that the nutritional changes and chronic ill health frequently occurring in patients with chronic tricuspid disease may have accounted for these phenomena, and it may not be necessary to implicate the lymphopenia as a mechanism for apparent cutaneous anergy. Clearly, we are indebted to the authors for elucidation of the association of protein-losing enteropathy and tricuspid insufficiency.

M. JOHN MURRAY
To study the effect of partial ileal bypass on cholesterol metabolism, seven patients were given an intravenous injection of cholesterol-4-\textsuperscript{14}C 60 days prior to partial ileal bypass surgery. Following the injection, the specific activity of the serum cholesterol was determined two or three times a week until at least 60 days after surgery. In three patients a repeat study was done 1 year following surgery.

In order to calculate net sterol and bile acid excretion by the isotope balance technic, stool collections for determination of total radioactivity were obtained starting 2 weeks after the initial injection until 2 weeks prior to surgery and for another nine 12-day period 2 months after surgery.

A comparison of preoperative and postoperative specific activity curves revealed a shortened half-life of \textsuperscript{14}C-cholesterol in all patients following surgery. This finding persisted in the patients studied 1 year after operation. In these latter patients, there was a mean reduction of 6.26 g in the rapidly miscible cholesterol pool and of 22.46 g in the slowly miscible pool of cholesterol. Calculation of fecal sterol excretion by the isotope balance method confirmed the presence of an increased rate of cholesterol excretion after ileal bypass surgery.

These findings suggest that ileal bypass surgery results in an increased excretion of cholesterol and a reduction of the total body cholesterol pool.
150 Years Ago
Laennec on Feeling the Pulse

After what has been said, and after its general uncertainty avowed by the most experienced practitioners, it may seem surprising that the practice of feeling the pulse has been so generally followed in all ages. The reason of this practice is, however, sufficiently obvious: it is of easy performance, and gives little inconvenience either to the physician or patient; the cleverest, it is true, can derive from it but a few indications and uncertain conjectures; but the most ignorant can, without exposing themselves, deduce from it all sorts of indications. Its very uncertainty gives it a preference with persons of inferior qualifications, over means quite certain in their nature, and which enable the non-professional observer to judge of the skill of the physician by the correctness of his diagnosis and prognosis.—R. T. H. LAENNEC: A Treatise on the Diseases of the Chest, in which They are Described According to Their Anatomical Characters and Their Diagnosis Established on a New Principle by Means of Acoustik Instruments. Translated with a preface and notes by JOHN FORBES. In WILLIUS, F. A., AND KEYS, T. E.: Classics of Cardiology, vol. 1. New York, Dover Publications, Inc., 1941, p. 342.
Anatomy and the Curriculum

Why Not?*

In contrast to the “monolithic” concept held by many—that anatomy is a study of dried bones and cadavers—the present research frontiers of anatomy are most exciting. The anatomist may still dissect the body as part of his teaching responsibilities, but he also utilizes a variety of research technics which are heavily dependent on the methods and instrumentation of chemistry and physics. He dissects tissues into their component structures under the binocular microscope and cells into their subcellular organelles by means of the ultracentrifuge. Although the modern anatomist is still studying bones, he is concerned with the dynamic aspects of bone, i.e., with the fourth dimension of structure—time. The new vistas of anatomy are developing as rapidly as are those in other fields of biomedical research.—From J. ARTHUR MYERS: Masters of Medicine: An Historical Sketch of the College of Medical Sciences, University of Minnesota 1888-1966. St. Louis, Warren H. Green, Inc. 1968, p. 263.

*Some men see things as they are, and say “Why?”
I dream of things that never were
and say “Why not?”—G. B. Shaw
Minuscule Review
Good Logic by a Medical Sleuth


Dr. Shee has searched for information that might bear on the nature of a long illness and death of Cecil Rhodes and concludes that the basic problem was an atrial septal defect. From the facts given, his conclusion is an attractive and logical one. Rhodes’ symptoms and disability began in adolescence and had been suspected as being tuberculosis, but Shee points out the lack of any definite evidence for such a hypothesis and, how well the story would fit an atrial septal defect with a late-developing right-to-left shunt and eventually heart failure. The records of the postmortem examination were not of definitive help, indeed frustrating, as apparently the heart chambers were not opened. A “large cardiac aneurysm” was reported but perhaps this might have been enlargement of the right ventricle or the pulmonary artery. Of incidental interest is the fact that Rhodes’ voice was high-pitched and said to have become falsetto when excited. Possibly this could have been related to paralysis of the left recurrent nerve, sometimes occurring with aneurysmal dilatation of the pulmonary artery.

Dr. Shee has prepared a convincing brief indicating Cecil Rhodes suffered from, and died of, congenital heart disease. The exact nature of the defect remains conjectural; but Shee’s choice of an atrial septal defect is well supported by his data and argument.

H.B.B.
Heart Sounds—Laennec Early Confusing Conjectures
150 Years Ago

The alternate contraction of the different parts of the heart produces a peculiar sound, of which the individual is himself sensible during palpitation and in fever. In certain states of disease it can be heard at some distance from the patient; but this is a very rare case. The sound is the only phenomenon usually observable in any other part of the chest beside the precordial; the impulse of its action being confined, as already observed to that part.

The sound produced by the action of the heart is great in proportion as the parietes of the ventricles are thin and their impulse feeble: consequently, it cannot be attributed to the percussion of this organ against the side. In a moderate degree of hypertrophia, the contraction of the ventricles yields only a dull sound, like the murmur of inspiration, and the auricle, in like manner, a much less noise than in the natural state. In a high degree of hypertrophia, the contraction of the ventricles produces merely a shock without any sound, and the sound of the auricles is scarcely audible. On the other hand, when the ventricular parietes are thin, the noise produced by their contraction is clear and loud, approaching to that of the auricles; and if there be a marked dilatation of the ventricles, the sound becomes very similar, and almost as strong as that of the auricles.—R. T. H. LAENNEC: A Treatise on the Diseases of the Chest, in which They are Described According to Their Anatomical Characters and Their Diagnosis Established on a New Principle by Means of Acoustik Instruments. Translated with a preface and notes by JOHN FORBES. In WILLIS, F. A., AND KEYS, T. E.: Classics of Cardiology, vol. 1. New York, Dover Publications, Inc., 1941, p. 336.
Minuscule Review


It is a curious fact that the intermarriage between persons of different nations has not had a greater effect on the abolition of nationalism, provincialism, and chauvinism. One feature of the paradox appears to be the relative subjection of the maternal background. The authors discuss the racial designation of Roentgen, as his mother was Dutch and he resided in Holland during most of his childhood and adolescence, though born in Germany and lived his productive life therein. One might expect Roentgen himself to answer the question by saying it had no meaning and that possibly even he might say a scientist is a citizen of the world. It is thus of further interest that when he married he chose a Swiss.

H.B.B.