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heart when a knife is used to accomplish this end. It was this inconstancy that led us to develop a ligature technique in which assured severance of all fibers encircled by the ligature was a dependable and demonstrable consequence.

Present-day investigators have amplified and enriched observations of the electrocardiographic consequences of lesions affecting the conduction system by use of a variety of leads from the surface of the body and, more particularly, by direct and intramural leads from the ventricle itself. These efforts have provided additional facts of material significance in understanding the nature of conduction aberration produced by specific lesions in the conduction system, but they have served to amplify rather than to contradict the careful experimental studies of Rothberger and Winterberg. Appropriately then, we honor the fiftieth anniversary year of these pioneers in the field of experimental electrocardiography.

RAYMOND D. PRUITT

References

On Methodology

... goals are achieved by some means, and sooner or later even the most impulsive man of action will discover that some ways of achieving the goal are more effective than others. A concern for how to do it is the root impulse in all great craftsmanship, and accounts for all of the style in human performance. Without it we would never know the peaks of human achievement.

Yet, ironically, this concern for “how it is done” is also one of the diseases of which societies die. Little by little, preoccupation with method, technique and procedure gains a subtle dominance over the whole process of goal seeking. How it is done becomes more important than whether it is done. Means triumph over ends. Form triumphs over spirit. Method is enthroned. Men become prisoners of their procedures, and organizations that were designed to achieve some goal become obstacles in the path to that goal.

old and new, for differentiating between ectopic ventricular beats and aberrant ventricular conduction in the presence of atrial fibrillation. Progr Cardiov Dis 10: 18, 1966.


50 Years Ago:
Growth and Form

In the case of the heart we have, within each of its cavities, a pressure which, at any given moment, is constant over the whole wall-area, but the thickness of the wall varies very considerably. For instance, in the left ventricle, the apex is by much the thinnest portion, as it is also that with the greatest curvature. We may assume, therefore (or at least suspect, that the formula, \( t(1/r + 1/r') = C \), holds good; that is to say, that the thickness \( (t) \) of the wall varies inversely as the mean curvature. This may be tested experimentally, by dilating a heart with alcohol under a known pressure, and then measuring the thickness of the walls in various parts after the whole organ has become hardened. By this means it is found that, for each of the cavities, the law holds good with great accuracy. Moreover, if we begin by dilating the right ventricle and then dilate the left in like manner, until the whole heart is equally and symmetrically dilated, we find (1) that we have had to use a pressure in the left ventricle from six to seven times as great as in the right ventricle, and (2) that the thickness of the walls is just in the same proportion.—D'Arcy Wentworth Thompson: On Growth and Form. Cambridge, University Press, 1917, p. 666.


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**Stability of Bundle-Branch Block (31 years)**

**Simultaneous ECG Leads (1925)**

Record of an electrocardiogram by means of a capillary electrometer taken on June 15, 1894, i.e. before the construction of the string galvanometer. Lead I.

The same patient but investigated 31 years later with three leads simultaneously. The disease has remained unchanged. One notes the similarity of the curves taken with the capillary electrometer and the galvanometer with Lead I.

EFFECT OF DIPHENYLHYDANTOIN


Comments on the Medical Library

In respect to human population we may look forward hopefully to birth control, but in respect to the population of the library I see no solution in the foreseeable future except to reply on informed but brutal selection of only that material proper to medical science and practice. It would be appropriate to start a discussion of this selective process by defining medicine, but this is difficult to do. Webster’s definition of medicine as “the science and art dealing with the prevention, cure and alleviation of disease” is less a definition than a statement of one of its goals. I cannot supply a better definition unless it is to suggest that this goal is to be attained by the study of the normal and abnormal physiology of living organisms. (Even here the words ‘normal’ and ‘abnormal’ are ambiguous unless we distinguish the abnormal as that which carries the threat of pain, disability or death, or otherwise diminishes human happiness.) In the light of this definition, however, I will venture to outline a working philosophy for a medical library, one partly calculated to prevent the library from dying a Malthusian death—HOMER W. SMITH: On the Reading of Scientific Papers. Trans Ass Amer Physicians 70:46, 1957.


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On Psychosocial Evolution

... Perhaps this is why he believed in the inevitability of progress; or if his interpretation were true, social evolution would be cumulative and virtually irreversible. We know better: that we are all born into the Old Stone Age and in principle could stay there.

Psychosocial evolution differs from ordinary genetic evolution in three important ways: It is not mediated through genetic agencies; it is reversible, in the sense that what it has gained can in principle be wholly lost, and in one generation; and it is an evolution in the Lamarckian style, in the sense that a father's particular knowledge and skills and understanding can indeed be transmitted to his son, though not (as Spencer supposed) through genetic pathways. Common sense suggests that differences of this magnitude should be acknowledged by a distinction of terminology. The use of the word 'evolution' for psychosocial change is not a natural usage, but an artificial usage adopted by theorists with an axe to grind. If by any chance it had been a natural usage, people like myself on occasions like this would have said over and over again how wrongheaded it was, and how wise we should be to abandon it.—P. B. MEDAWAR: The Art of the Soluble. London, Methuen & Co. Ltd., 1967, p. 47; also distributed by Barnes & Noble, Inc., New York.