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Minuscule Review

Lown B, Ruberman W: The concept of precoronary care.

Amongst the educational endeavors of the American Heart Association is the publication of "Modern Concepts of Cardiovascular Disease." It is widely, although possibly unevenly, distributed by the affiliates to the medical profession. In the May issue Dr. Lown and Dr. Ruberman discuss succinctly the possibilities of preventing deaths from coronary disease and the essay is an admirable model of communication. The concisely written paragraphs are entitled: "Mechanism of Sudden Death," "Precoronary Care," "Population at Risk from Sudden Death," "Acute Myocardial Infarction Group" (with subtitles to this, entitled "Patient Delay," "Physician Delay," "Transport Delay," and "Emergency Room"), "The Symptomatic CAHD Patient," "Sudden Instantaneous Death," and "Final Considerations."

The challenge to the medical profession is fully stated, and it is to be hoped that not only physicians but administrators in the health field will become acquainted with this informative, authoritative bulletin. In addition to being an excellent review, it includes gems of unpublished information, for instance, estimates of the number of men at high risk in the country and the percentages of persons dying suddenly who had had prodromata or had visited their physicians a short time prior to their demise.

The bibliography of 36 references has been well selected.

All the above compliments pointing to the literary and scientific excellence of the essay of Drs. Lown and Ruberman do not imply that there are not some points for argument and discussion; for example, concepts of post-coronary care and the possible right of the very elderly to have an illness at home. The authors imply further work being necessary in their last paragraph stating, "These considerations represent a beginning and, like many beginnings, they are faulted by inadequate data" and are not a "completed map, but are . . . sketchings, hopefully pointing to the direction for further advance."

H.B.B.
Minuscule Review

Symposium on Physiological and Clinical Aspects of Cardiac Rehabilitation.

Cagliari, Sardinia, June 1968.


A 1968 symposium, sponsored by the Council for Rehabilitation of the International Society of Cardiology and Cagliari University in Sardinia, attempted to review the physiologic, clinical, psychologic, and social aspects of rehabilitation in cardiovascular diseases. This initiative, by distinguished practicing cardiologists and researchers, points up the important integration under way between the discipline of traditional diagnostic and therapeutic medicine, and those of preventive, rehabilitative, and social medicine. The volume contains much information of interest to the physician in practice in readable, short presentations. As in the case of most symposia, their quality is not uniform.

Considerable attention is given to stress testing including concepts and information about the freedom from rigid testing constraints now possible by the use of more "equivalent" physiologic stresses relating to maximal work capacity or to target heart rates, the relatively good repeatability of progressive stress tests, a large experience of maximal tests in post-infarction patients, and the advantages of beat-to-beat cardiac monitoring during stress tests. Method and procedure are discussed including telemetry and extended monitoring of heart rate and blood pressure during stress tests and during daily activities.

A phenomenon that most have observed, the delayed ischemic response occurring during recovery, is explored and partly explained by findings on indirect estimations of cardiac work during recovery.

Evidence is presented that the exercise ECG response in post-infarction patients is predictive of subsequent risk of reinfarction. The characteristics, advantages, and disadvantages of different types and modes of exercise testing are well reviewed.

Among the problems discussed are those relating brachial artery pressure measured during work to a tension-time index (cardiac work and myocardial oxygen consumption). Evidence is presented that peripheral blood pressure measurement overestimates the work load of the ventricles during exercise.

Exercise studies in hypertensive subjects revealed higher work blood pressures and vascular resistance with normal cardiac output. Exercise studies in coronary patients revealed normal hemodynamic responses when they remained "within the limits of their work capacity." Inappropriate hemodynamic responses to work are described in some cardiac patients.

Heart volume during work and its changes as a result of conditioning are discussed, as well as variations of total hemoglobin which are found to relate to age, to physical restriction, and to hypoxia, but not otherwise to the type or severity of chronic cardiopulmonary diseases.

Evidence is given of the remarkable pressure load imposed on the heart by static work and its potential danger to the cardiac patient.

The response to physical conditioning is found to depend on the initial level of fitness in relation to one's potential, expressed as the expected "normal level" for age. Potential for conditioning is very low at advanced ages.

Some of the experience is recounted of formal, ongoing conditioning programs among cardiac patients, in the U. S. and in Europe.

Henry Blackburn
15. BiebeR CP: Unpublished data

Sympathetic Magic—Essence of Drama
Addendum for the Golden Bough

. . . . 'Dr. Blaiberg, do you realize that you are the first man, in the history of mankind, to be able to sit, as you are now, and look at his own, dead, heart?' Believe it or not, I had been so interested, perhaps shocked, by the appearance and condition of my heart that I had not given a thought to the historic implications. 'Now that you mention it,' I said somewhat abashed, 'It does occur to me that I have been looking at my heart.'

The photographer's bulbs flashed and the occasion was captured for posterity. The heart itself is now a celebrated pathological specimen.—From Philip Blaiberg: Looking at My Heart. New York, Stein and Day 1968, p 134.
Variations in the Left Bundle System—Tawara, 1906


The outline of specialized tissue has been demonstrated by adding a transparent overlay to a photograph of the specimen.
EFFECT OF PREGNANCY ON CARDIAC MURMURS

30. REDLEAF PD, FADELL EJ: Bacteremia during parturition. JAMA 169: 1284, 1959
32. SCHRIRE V: The relation of the apical systolic murmur to mitral valve disease. Amer Heart J 68: 305, 1964

Bedside Medicine

Need for a Wider Horizon

... The call for teaching at the bedside is old and there again is a demand to replace most lectures by bedside instruction. As I told you, I was not addicted to formal lectures myself but I have to point out that many aspects of clinical knowledge cannot be taught at the bedside. Prevention of diseases, in my opinion the highest form of medicine, cannot be taught at the bedside because the protected persons are well and walking around. Prenatal diseases which can be so devastating to the unborn child, are another example. They cannot be taught at the bedside since neither the mother nor the embryo or fetus is in bed during the fateful days. At the bedside you can see a tiny sector of the area that must be known. But you have to learn to supplement these quick glimpses by intensive studies of books or with other devices.—From WARKANY, JOSEF: Convocation Address at the opening of the 150th year of medical classes at the University of Cincinnati, September 29, 1969. Medical Alumnal Bulletin of the University of Cincinnati 22: 1, Winter, 1969.
Minuscule Review


Mulvihill and Smith have assembled impressive and engaging observations and data to update and support the hypothesis “that the dermal ridge configurations are the immediate result of physical and topographic growth forces affecting volar skin which is predisposed in a polygenic manner to form parallel dermal ridges,” a concept set forth by Cummins almost 50 years earlier. The core principles state that parallel epidermal ridges develop transversely to the lines of growth stress and that fetal pads or other surface distortions result in curvilinear lines of stress, thereby producing more complex configurations. The authors emphasize that dermatoglyphics provide a historical perspective of the hand morphology around the thirteenth to nineteenth weeks of prenatal life, thus being related to both genetic and environmental factors that may have influenced shaping and growth of the fetal hand up until the nineteenth week. It is pointed out that dermatoglyphic traits have such a wide distribution in normal individuals that no single finding can be considered pathognomonic, and caution is recommended in the clinical use of dermatoglyphics for this and other statistical reasons.

For those readers wishing to learn the language of dermatoglyphologists, Penrose’s memorandum on the results of a symposium on nomenclature will serve as an excellent guide. (Penrose LS: Memorandum on dermatoglyphic nomenclature. In Birth Defects, Original Article Series, vol. 4, no. 3. New York, The National Foundation 1968, 13 pp.)

R.C.A.
Minuscule Review

Durrer D, Schuilenburg RM, Wellens HJJ: The role of the A.V. junction in the genesis of arrhythmias in the human heart.

This paper, presented in part as the "Einthoven Lecture" at the University of Leiden, in November 1968, reminds one that excellent reviews, mixed with selected gems of new investigations may be hidden from potentially interested readers because of a general title and the publication in a little-known journal. Probably all scientists accepting the responsibility of delivering a named lecture wish to excel or equal the efforts of the previous lecturers and therefore each will prepare his oration with unusual care. The paper on the function of the A-V node by Dr. Durrer and his colleagues, which I would list as excellent, is such an outstanding example.

In this paper the authors discuss, with clarity, in English, the varying types of A-V and V-A conduction; atrial echo beats; ventricular echo beats; the gap in A-V conduction which may be observed in patients with Stokes-Adams attacks; the different hypotheses for the occurrence of the gap ("jump") in A-V conduction (specifically, longitudinal dissociation or transversal dissociation in the node); concealed conduction at the A-V junction; impulse formation and escape mechanism; retrograde conduction in total A-V block, and the function of the A-V node during supraventricular tachycardia. One investigative gem presented is the demonstration of concealed conduction in an individual who had 4:1 heart block with the atria being paced; the protocol called for a drop of each of the three stimuli preceding the conducted atrial beats, separately and sequentially. Deletion of the second atrial beat was followed by A-V conduction of the third atrial beat. The explanation is given in detail. The paper elucidates atrophicentricular conduction problems up to 1969 although it does not include any extended discussion of the controversy concerning potentials recorded from the nodal area nor give recordings of His bundle potentials.

The paper also is excellently illustrated and I recommend it highly. In the reprint sent me, the authors noted that the legends for figures 15 and 16 are interchanged; this, while possibly a source of chagrin to them, should be a negligible annoyance to the reader.

H.B.B.
Figure from PATTEN, B. M.: Human Embryology. Ed 3. Copyright (c) 1968 by McGraw-Hill, Inc. Used with permission of McGraw-Hill Book Co.

This page from Human Embryology written by Bradley M. Patten is reproduced in tribute to Dr. Patten's stimulating enquiries concerning the development of the heart and its adaptation to the unique demands upon it at birth. The book, first prepared a quarter century ago and now in its third edition, helped to keep vibrantly alive the discipline of embryology.

H.B.B. and J.E.E.
Minuscule Review

A Use of the Hyperbaric Chamber


The author gives a racy, police-blotter account of an individual exposed in a tank of solution containing silver cyanide in which he sought to hide when interrupted in a thievery expedition. He was unconscious within a few moments but surprisingly was still alive when taken to the hospital. He became conscious when exposed to two additional atmospheric pressures of pure oxygen (three atmospheres absolute, the blood oxygen tension being measured at 2,000 ml of mercury). There was gradually "ascent" in the chamber in an hour and recovery ensued. It must be regretted that further chemical analyses of the blood and electrocardiograms were not made. Cyanide poisoning of this magnitude has generally been considered so rapidly and irreversibly fatal that the case is worthy of notice.

Cursory mention of traditional therapy with amyl nitrite and thiosulfate is made. The short paper, despite its shortcomings, reflects the alert and keen mind of the resident who arranged for the hyperbaric oxygenation and supports the use of such equipment when it is available. The advantages of hyperbaric chambers to an institution have been outlined in an editorial in Circulation in 1966 (Stead, Eugene, Jr.: Hyperbaric oxygenation. Circulation 34: 361, 1966).

H.B.B.
Drinking games were very popular. Some of these games required special glasses. The Dutch would have failed their mission in this world if they had not invented a game with a glass and a windmill. . . . The player sets the sails in motion by blowing into a tube, and tries to finish the glass before the sails stop turning. Connected to the sails is a pointer moving over a dial numbered from 1 to 12. The penalty for failing to empty the glass in time is to drink the glass as many times as the pointer indicates. [The glass can be put down only when empty.]—TH. VAN ERP: Drinking with the Masters. Brit J Addict 64: 63, 1969.