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operate is as major a decision as the decision to intervene.

Being global in practice, it seemed judicious and timely to try to assess the present status of cardiac surgery at the Fifth World Congress of Cardiology in New Delhi, India, in November 1966. The results of surgical treatment of ten cardiac lesions were appraised by distinguished cardiologists closely associated with a leading cardiac surgeon. The purpose was to attempt to evaluate the manner in which cardiac surgery has altered the natural course of the given disorder. There were pre-congress meetings of the participants, all of whom were familiar with each of the topics. The symposium thus reflected to a considerable extent the experience of the whole group rather than that of a single individual.

The symposium entitled “Evaluation of Results of Cardiac Surgery” has now been published and appears as a Supplement to this issue of CIRCULATION. It is a serious attempt by a knowledgeable group to assess effectiveness of surgery in the treatment of heart disease. The conclusions will have to be periodically amended. This Supplement can claim some elucidation of what surgery has accomplished and how the patients’ postoperative courses differ from the natural course of disease, and it gives opinions as to the optimal time for surgical intervention.

LEWIS DEXTER

Rheumatism and Heart Disease (Bouillaud)
Venesection and Therapeutic Misadventure
Early Nineteenth Century

Most assuredly, every one will agree with Sydenham, that it is a melancholy thing to be obliged to take away a large amount of blood in the cure of rheumatism. But it is a sacrifice which prudence commands. . . .

Among such as shall be thus treated, it will be found that a rheumatic inflammation of the pericardium, endocardium, pleura, etc. will carry some off; and others, who may be either more, or shall I say, less fortunate, will sink at a later date under an organic disease of the heart. With a knowledge of such dangers, proved as they are by daily experience, is it really so great a sacrifice to lose some pounds of blood for the almost certainty of a cure at once prompt, permanent, and complete? Undoubtedly, if time, and experience, the mother of all discoveries, teaches us a method as sure and less prodigal of blood, we ought to hasten to adopt it as a great benefit. But either I am much deceived, or the time is yet far distant when we shall know how to cure surely, permanently, and completely (I will omit promptly), this terrible acute articular rheumatism, which is almost always accompanied with pericarditis or endocarditis, not to mention other complications.—J. BOUILLAUD: New Researches on Acute Articular Rheumatism in General; and Especially on the Law of Coincidence of Pericarditis and Endocarditis with This Disease, as Well as on the Efficacy of the Method of Treating It by Repeated Blood-Lettings at Short Intervals, translated by James Kitchen. Philadelphia, Haswell, Barrington, and Haswell, 1837, p. 55.
dependent upon the time relations of auricular and ventricular systole: Supernormal phase. Amer Heart J 17: 524, 1939.


On Teaching

The teacher and student of history—and all human situations have a history—must follow the advice given by the resourceful wife to her husband as he stood on the top of a tall chimney from which the scaffolding had collapsed. All ladders were too short, all efforts to throw up ropes had failed. It was then the wife called, “John, take off your sock and unravel it, but begin at the toe.” That thread would make it possible to lift ropes of greater strength, but to get the thread he must begin his unraveling at the toe. The simplest political or social situation we study, whether in the nation, the state, or the school district, is the toe of a historical sock. Good teaching must at least start the unraveling whose end-result will lift problem and class to the level where long views give that perspective and proportion that are the finest and most permanent result of teaching and study.—Guy Stanton Ford: On and Off the Campus. Minneapolis, University of Minnesota Press, 1938, p. 387.


Human Pulmonary Artery Pressures (1945)
(Cournand)

"... For me this tracing holds a unique place, since it is the first demonstration that the tip of a catheter was placed in the pulmonary artery of man in order to record pressure pulses. Subsequent progress in our knowledge of the dynamics of the pulmonary circulation in man owes much to the technique of catheterization of the pulmonary artery."—A. Cournand: Description of the Prize-Winning Work. In Sourkes, Theodore L.: Nobel Prize Winners in Medicine and Physiology 1901-1965. London, Abelard-Schuman, 1966, p. 336.
Cardiac Fluoroscopy
Hazardous Beginnings (1896)

In examining the heart by means of percussion, we can usually determine its left border, but we cannot find its lower border. Now let us see what can be done in this direction by means of the x-rays. The constant motion of the heart and diaphragm interferes with the use of radiography but renders fluoroscopy all the more valuable. The lungs and the organs adjacent to them are the parts of the body which best lend themselves to fluoroscopic examination, because of the great difference in density between the former and the latter, or, in other words, of permeability to the x-rays. The lungs being less dense than the neighboring organs allow the x-rays to pass through them more readily, and thus appear light against a darker background formed by the heart and parts of the liver and spleen, which, owing to their density, are less permeable by the rays and thus appear dark when seen through the fluoroscope, that is, there is contrast.

...A suitable position of the Crookes tube of course facilitates this end somewhat. It is desirable to see as much as possible of the heart at one time in order to best estimate its condition—then if necessary we may study one or another portion separately—and by means of this fluoroscopic examination we can follow a larger portion of its outline and gain more information as to its size, position and action than has hitherto been within our reach. I may add here that I have made an instrument that enables me to listen to the heart-sounds while watching the pulsating organ.—FRANCIS H. WILLIAMS: A Method for More Fully Determining the Outline of the Heart by Means of the Fluoroscope Together with Other Uses of This Instrument in Medicine. In WILLIUS, F. A., AND KEYS, T. E.: Classics of Cardiology, vol. 2. New York, Dover Publications, Inc., 1941, p. 701.


Atrioventricular Valves—Harvey, 1628

There are three forked portals in the entry of the vena cava and arteria venosa, lest that when the blood is most driven out it should fall back, and for that cause they are not in all creatures, and in those in which they are, they do not seem to be made by the same diligence of Nature, but in some they are shut more exactly, in others more carelessly and negligently; therefore in the left ventricle, that for the greater impulsion there may be a closer stoppage, there are only two like a Mitre, having tendons reaching out far, even to the conus of it, through its middle, that they may be most exactly shut . . . therefore these portals do much surpass in bigness, strength, and exact shutting, those which are placed in the right.—The Anatomical Exercises of Dr. William Harvey: De Motu Cordis 1628; De Circulazione Sanguinis 1649 (first English text). Edited by Geoffrey Keynes. London, The Nonesuch Press, 1653, p. 109.

Polygraphic Records by Mackenzie
status of the patients 5 years after catheterization to the ratio of pulmonary to systemic resistance. The absence of change in this ratio with increased age is the result of an increased systemic resistance in the older patients. There is no relation between 5-year survival and severity of pulmonary vascular disease as presented by a comparison of pulmonary and systemic resistance. Figure 6 shows the relation of age at the time of review to systemic arterial oxygen saturation at the time of initial catheterization. There is again no obvious relationship between prognosis and arterial oxygen saturation.

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**Reference**


**Radical “Surgery” for Writers**

In criticism, no faint praise. Take away from the author everything that is not his by right, take it as a surgeon takes away every last cell of morbid tissue, with a strict and relentless knife; then cauterize the wound and help the victim to his feet again and send him away with both hands filled with flowers.

An author whose tissue is so morbid that he cannot survive the operation should not to be subjected to it. He should be allowed to die in peace.—Van Wyck Brooks: *From a Writer’s Notebook*, New York, E. P. Dutton & Co., Inc., 1958, p. 111.


Inscrutable Judgments

And if, whether in real life or even in chess, you begin to tamper with basic notions—continuity of space, divisibility of time and the like, you will soon reach a stage in which the symbols fail to function, your thoughts become confused and paralysed. Consequently the fuller our knowledge of facts and of their connections the more difficult to conceive alternatives; the clearer and more exact the terms—or the categories—in which we conceive and describe the world, the more fixed our world structure, the less 'free' acts seem. To know these limits, both of imagination and, ultimately, of thought itself, is to come face to face with the 'inexorable' unifying pattern of the world; to realize our identity with it, to submit to it, is to find truth and peace. This is not . . . a yearning for mystical illumination or integration. It is scrupulously empirical, rational, tough-minded and realistic. But its emotional cause is a passionate desire for a monistic vision of life on the part of a fox bitterly intent upon seeing in the manner of a hedgehog.—Isaiah Berlin: The Hedgehog and the Fox. New York, A Mentor Book. New American Library of World Literature, Inc., 1957, p. 113.