Embryology of the Heart—Harvey, 1628

In a Hen’s egg I shewed the first beginning of the Chick, like a little cloud, by putting an egg off which the shell was taken, into warm water and clear, in the midst of which cloud there was a point of blood which did beat, so little, that when it was contracted it disappeared, and vanish’d out of our sight, and in its dilatation, shew’d it self again red and small, as the point of a needle; insomuch as betwixt being and not being, it did represent a beating, and the beginning of life.—The Anatomical Exercises of Dr. William Harvey: De Motu Cordis 1628; De Circulatione Sanguinis 1649 (first English text). Edited by Geoffrey Keynes. London, The Nonesuch Press, 1653, p. 34.


Angina Pectoris and Claudication from a Tourniquet, 1809

In health, when we excite the muscular system to more energetic action than usual, we increase the circulation in every part, so that to support this increased action, the heart and every other part has its power augmented. If, however, we call into vigorous action, a limb round which, we have with a moderate degree of tightness applied a ligature, we find that then the member can only support its action for a very short time; for now its supply of energy and its expenditure, do not balance each other; consequently, it soon, from a deficiency of nervous influence and arterial blood, fails and sinks into a state of quiescence. A heart, the coronary vessels of which are cartilaginous or ossified, is in nearly a similar condition; it can, like the limb, be girt with a moderately tight ligature, discharge its functions so long as its action is moderate and equal.—Allan Burns: Observations on Some of the Most Frequent and Important Diseases of the Heart (1809). New York Academy of Medicine, History of Medicine Series. New York, Hafner Publishing Co., 1964, p. 138.


between the control period and under angiotensin; for this reason, intravascular renal changes apparently had no influence on the two types of response observed.

Our results seem to indicate that increase or decrease in sodium excretion is related to the mean arterial blood pressure before administration of angiotensin but not to the increment in blood pressure produced by the substance.

As in the control period, no differences in glomerular filtration rate between the two groups of patients were found under the action of angiotensin. This function probably remained unchanged in spite of the fact that afferent arteriolar resistance rose markedly inasmuch as both mean arterial blood pressure and efferent arteriolar resistance increased.

Renal plasma flow decreased in both groups which may be explained by the increase in afferent as well as efferent arteriolar resistance.

References

Value of Venous Catheterization: First Efforts of Young Investigators

By the time Joseph Aub studied Physiology in 1911, Cannon had become interested in the effect of epinephrin on the gastrointestinal tract. He invited students of his class to come into the laboratory to try their hands at research if they wanted to. Cannon suggested that Aub and Binger study the influence of smoking on the flow of epinephrin, and the experiment took the form of working with nicotine and cats. A catheter was passed up the femoral vein of the cat until it was opposite the adrenal, then samples of blood were sucked out and tested for the presence of epinephrin, by means of its effect on smooth muscle contraction. In this way it was clearly shown that nicotine stimulated the flow of epinephrin. The first publication of Joseph Aub, with Cannon and Binger, reported this finding in the Journal of Pharmacology and Experimental Therapy (3, 379, 1912).—Paul Zamcnik: Presentation of the Kober Medal for 1966 to Joseph Charles Aub. Trans Ass Amer Physicians 79: 85, 1966.


Nature's Experiments

... "Peradventure this is not fortune's work neither, but Nature's; who perceiving our natural wits too dull to reason of such goddesses has sent this natural for our whetstone. . . ."

All scientists, including clinical scientists, are products of their culture and society. Indeed, in a very real sense, we are the very servants of our poets, artists, philosophers, theologians, and academicians. We must now be prepared to adapt to a new era. It is one in which we can play a formulating role if we will but accept the challenge. We must not be hypersensitive to criticism; we must be communicative; we must contribute in the most positive way possible to the development of a cultural philosophy that will continue to foster the most effective interpretation of Nature's experiments, and the attainment and utilization of scientific knowledge to the welfare of our patients and all mankind.—Robert A. Good: Presidential Address: The Whetstones. J. Lab Clin Med 69: 7; 13, 1967.
determining the evolution of the disease by repeated angiography, and thus our experience is too limited to permit firm conclusions. (2) The earliest lesions of the left ventricle will, we believe, require careful analytical study by cineangiography, but our present facilities do not permit us to carry out this technique.

Acknowledgment

We are grateful to Professor G. M. Edington who reviewed the morbid anatomy and histology of the postmortem cases. We wish to thank all those who have been concerned over many years in this work, particularly Professor D. G. Abrahams, Dr. E. H. O. Parry, Dr. I. Brockington, Dr. Uzodike, and Dr. G. Thorpe. This work would not have been possible without equipment provided by the Nuffield Foundation and the help of the W. H. O. Ibadan Cardiac Registry.

References


Foetal Circulation—Harvey, 1628

For the right receiving the blood from the ear, thrusts it forth through the vena arteriosa, and its branch called canalis arteriosus, into the great arterie. Likewise, the left at the same time by the mediation of the motion of the ear, receives that blood, which is brought into the left ear through that oval hole from the vena cava, and by its tention and constriction thrusts it through the root of the Aorta into the great arterie likewise. So in Embryons whilst the lungs are idle, and have no action nor motion (as if there were none at all) Nature makes use of both the ventricles of the heart, as of one for transmission of blood. And so the condition of Embryons that have lungs and make no use of them, is like to the condition of those creatures which have none at all.—The Anatomical Exercises of Dr. William Harvey: De Motu Cordis 1628; De Circulatione Sanquinis 1649 (first English text). Edited by Geoffrey Keynes. London, The Nonesuch Press, 1653, p. 46.

Clinical Research:
Method, Support, and Ethic

Those of us who are engaged in medical education and research fear the treason of the clerks, who wish to have everything tidy and circumscribed and who forget that the oak sheds ten thousand acorns to produce another tree and the fish spawns a million eggs to maintain the race of fishes. Research requires a spirit, not of prodigality but of magnificence, using that word as it was used by the Greeks, who thought that three virtues are essential if a democracy is to remain great—proper ambition, magnificence, and greatness of spirit. . . .
There is at present a good deal of uninspired clinical research, research of which we may say, in Lord Macaulay’s words, “The inquiry may amuse us but the decision leaves us no wiser.” Apart from ethical problems, therefore, it is a good thing that clinical science and human experiment should recently have come under sharp scrutiny. There is need to bring together in frank cooperation the people who do the experiments and those who submit to them. If only those things are done which can be explained and agreed to by an intelligent patient, clinical research as a whole will greatly gain. Not only what is unreasonable but what is jejune and trivial will not be tolerated. A voluntary hospital used to mean a hospital in which the doctors gave their services voluntarily; it may come to mean one in which the patients voluntarily cooperate in research.
FALSE ANEURYSM OF LEFT VENTRICLE

15. French, H.: Case of traumatic aneurysm of the heart of a child aged 3, resulting from a fall from a third story window to the ground, producing no definite cardiac symptoms during life but leading to sudden death by spontaneous rupture on the twentieth day after the accident. Trans Med Soc London 35: 245, 1912.

A Cycle of Life in Language, Too.

The means of reviving a language lie in the heart of the poet and upon his lips and between his fingers. The poet is the mediator between the creative power and the people. He is the wire that transmits the news of the world of spirit to the world of research. The poet is the father and mother of the language, which goes wherever he goes. When he dies, it remains prostrate over his grave, weeping and forlorn, until another poet comes to uplift it.—Spiritual Sayings of Kahlil Gibran: Edited by Anthony Rizcallah Ferris. New York, Citadel Press, 1962, p. 48.

Circulation, Volume XXXV, May 1967