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ondary to hypoxia, are the fundamental factors in the production of edema. It is interesting to note that hemodynamic measurements indicating normal capillary pressure in people affected by high-altitude pulmonary edema were actually taken after the edema existed. It would then appear that the passage of fluid from the vascular space to the alveoli had already occurred and, therefore, a fall in capillary hydrostatic pressure would be anticipated.

Sixto Recavarren, M.D.

References

Servetus and the Lesser Circulation

The most important physiological contributions of Michael Servetus are these: first, the passage of blood through the lungs; its mixing there with air, and its change in color; second, his emphasis on the size of the pulmonary artery, from which he deduced that it must serve some purpose other than transporting blood for the nourishment of the lungs; and third, his twice-repeated statement that there is no communication allowing blood to move through the interventricular septum.—André Courmand, M.D. Circulation of the Blood. Edited by Alfred P. Fishman, M.D., and Dickinson W. Richards, M.D. New York, Oxford University Press, 1964, p. 23.
rated blood in the main trunk of the pulmonary artery could do. Thus, in the presence of an intact ventricular septum, the high oxygen saturation of blood in the pulmonary artery, if used to determine pulmonary flow by the Fick formula, may give an erroneously high value.

Ferencz's report indicates that obstructive vascular changes occur in patients who have an intact ventricular septum. Rahimtoola's measurements of pressure in the pulmonary artery are lower than those in the systemic artery in his group of patients with intact septa. In the institution with which I am associated, the surgical successes achieved in intra-atrial reconstruction for transposition of the great vessels, with closure of a ventricular defect, if one is present, indicate that in many instances the pulmonary vascular obstruction is not severe and fixed, particularly in children more than a year old (Abstr. Circulation 32: II-113, 1965). In all the cases of Rahimtoola and associates the pulmonary arterial blood was sufficiently unsaturated to be a significant recipient of oxygen, and the oxygen saturation in the blood in the pulmonary artery was highest when an intact ventricular septum and pulmonary stenosis were present.

Additional questions that arise are (1) whether the arteriovenous shunts claimed to be present by Recavarren in the preceding editorial could be present and function in cases other than those of high-altitude pulmonary hypertension and (2) whether the changes in the pulmonary vessels in "dead cases" of transposition of the great vessels are in any way representative of the status of the vessels in surviving cases.

It is evident that additional data on pulmonary flow and pressure, the size of the left (pulmonary) ventricle, pulmonary artery and bronchial arteries, and pulmonary-vein-to-systemic-vein anastomoses will be needed in the solution of the present conundrums posed by those cases in which transposition of the great vessels is complicated by the presence of two nearly separated "parallel" circulations.

This editorial comment pertains only to the hemodynamic problems in the afore-mentioned anatomic situations. The two papers referred to in this issue of Circulation have better identified the problems and have made contributions toward their solution, and will be stimuli to further investigations.

HOWARD B. BURCHELL, M.D.
Two of the cases presented were in identical twins; serial scalar electrocardiograms and vectorcardiograms were obtained during the development and progression of endocardial fibroelastosis.

References

Ego Protection

Nothing has tended more to retard the advancement of science than the disposition in vulgar minds to vilify what they cannot comprehend.—Samuel Johnson.
INTERCORONARY ANASTOMOSES


To sum up, as the natural foundation of experimental medicine, experimental physiology cannot suppress observation of the sick or lessen its importance. Moreover, physiological knowledge is not only indispensable in explaining disease, but is also necessary to good clinical observation. For example, I have seen observers surprised into describing as accidents certain thermal phenomena which occasionally result from nerve lesions; if they had been physiologists, they would have known how to evaluate morbid symptoms which are really nothing but physiological phenomena.—Claude Bernard: An Introduction to the Study of Experimental Medicine. New York: The Macmillan Company, 1927, p. 200. Centenary of First Publication, 1865.
My conception of experimental medicine is summed up above. As I have often repeated, it is nothing but the consequence of the wholly natural evolution of scientific medicine. In this respect, medicine does not differ from other sciences which have all passed through empiricism before reaching their final experimental stage. In chemistry and in physics, practical methods of extracting metals, making magnifying glasses, etc., were known before the scientific theory evolved.

Empiricism, then, also guided these sciences through their nebulous days; but only since the advent of experimental theories have physics and chemistry taken such brilliant flights as applied sciences, for we must be careful to avoid confusing empiricism with applied science. Applied science always implies pure science as its support. Medicine will doubtless pass through empiricism much more slowly and laboriously than the physico-chemical sciences; not only because the organic phenomena with which it is concerned are much more complex, but also because the requirements of medical practice, which I need not study here, help to keep medicine in the personal realm, and thus oppose the experimental development.—CLAUDE BERNARD: An Introduction to the Study of Experimental Medicine. New York, The Macmillan Company, 1927, p. 215. Centenary of the First Publication, 1865.
Correction

Four patients, in curves, was operative study. The recorded were normal were shunt, determined to those present before operation. Fourteen patients had residual shunts that did not necessitate reoperation, and in eight patients, shunts present at the conclusion of the operation were shown to close in the postoperative period.

The study indicates that the recording of intraoperative indicator-dilution curves provides a reliable objective method for evaluating the effectiveness of operation in patients with circulatory shunts. If normal curves are recorded, no residual shunt may be expected in 98 per cent of patients, and postoperative catheterization may be unnecessary unless other hemodynamic data are required. If abnormal intraoperative curves are recorded, however, postoperative study is mandatory, since the shunt will persist in 80 per cent of patients, in many of whom a second operation will be indicated.

References

The Basic Attributes
They know enough who know how to learn.—Henry Adams.


“"It Was Decided I Should Become a Doctor"

For here I was in contact with what I most wanted, life in the raw. In those three years I must have witnessed pretty well every emotion of which man is capable. It appealed to my dramatic instinct. It excited the novelist in me. Even now that forty years have passed I can remember certain people so exactly that I could draw a picture of them. Phrases that I heard then still linger on my ears. I saw how men died. I saw how they bore pain. I saw what hope looked like, fear and relief; I saw the dark lines that despair drew on a face; I saw courage and steadfastness. I saw faith shine in the eyes of those who trusted in what I could only think was an illusion and I saw the gallantry that made a man greet the prognosis of death with an ironic joke because he was too proud to let those about him see the terror of his soul.—W. Somerset Maugham. In Fabrancnt, N. D. (Editor): Why We Became Doctors. New York, Grune & Stratton, 1954, p. 7.
than precede the presumed vascular occlusion. The increase may be simply one of many associated changes in the acute phase of the clinical episode.

Summary

In the plasma of patients with acute myocardial infarction the values for phosphatidyl ethanolamine are on the average 50% to 100% higher than in patients with chronic coronary heart disease and up to 400% higher than in normal individuals. Those for phosphatidyl serine are about 50% higher than in patients with chronic coronary heart disease and up to 300% higher than in normal individuals. Expressed in percentages of total phospholipids, the share of phosphatidyl ethanolamine in acute myocardial infarction is about twice as high as in chronic coronary heart disease and three times as high as in healthy persons. The share of phosphatidyl serine is about 50% higher than in patients with chronic coronary heart disease and also almost 300% higher than in healthy persons. Following the acute incident the values for the cephalins, both phosphatidyl ethanolamine and phosphatidyl serine, decrease slowly. Phosphatidyl ethanolamine reaches the level found in patients with chronic coronary heart disease in about 4 weeks, phosphatidyl serine in about 1 week.

References


There is a divine discontent with the existing order of things which leads to progress. Youth is always insurgent, a builder of images, a dreamer of dreams. When guided by scientific imagination youth builds images to be compared with known facts, and dreams true dreams. Age carries mental scars left by experience which contract and shorten vision, but age carries wisdom. Youth and age should travel together; each needs the other for orderly scientific advancement.—W. J. MAYO, Editorial. Surg Gynec Obstet 45: 115, 1927.
term observations indicates the following: (1) CPIB lowers Sf 20-10⁵ concentrations profoundly regardless of the initial lipoprotein distribution. (2) Addition of levothyroxine to CPIB produces no further significant effect on Sf 20-10⁵ concentrations. (3) The effect of CPIB on Sf 0-20 concentrations appears to depend on the initial lipoprotein distribution. In carbohydrate-sensitive hyperlipemias CPIB can markedly increase Sf 0-20 levels, whereas it has no such effect in other hyperlipoproteinemias. On occasion, a marked Sf 0-20 lowering effect occurs in patients with Sf 0-20 hyperlipoproteinemias. Two such instances are reported in detail. (4) In combined Sf 0-20 and Sf 20-10⁵ hyperlipoproteinemias the combination of CPIB and thyroxine is often more effective than either agent used separately in reducing total lipoprotein concentrations.

Acknowledgment

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References


An Eighteenth Century Cleric's Praise of Certain Physicians

Yet . . . from time to time, some lovers of mankind . . . have endeavoured (even contrary to their own interest) to reduce physic to its ancient standard: . . . Even in the last age there was something of this kind done, particularly by the great and good Dr. Sydenham: and in the present, by his pupil Dr. Dover, who has pointed out simple medicines for many diseases. And some such may be found in the writings of the learned and ingenious Dr. Cheyne: who doubtless would have communicated many more to the world, but for the melancholy reason he gave one of his friends, that prest him with some passages in his works, which too much countenanced the modern practice, "O Sir, we must do something to oblige the Faculty, or they will tear us in pieces."—JOHN WESLEY. Primitive Physic. London, The Epworth Press, 1960, p. 27.
References


Auscultation in Medico-Legal Cases

Among the most deplorable cases on record, in which innocent human life was deliberately taken, according to legal forms and by the adjudication of the supreme tribunals of the land, that of the child of Mrs. Spooner, who was executed July 2, 1778, stands preeminent. Under our modern means of diagnosis of the earlier periods of pregnancy, especially with our knowledge of obstetric auscultation, such a case I presume will never happen again. . . . Notwithstanding this urgent appeal of a mother in behalf of her innocent unborn babe, the honorable Council of Massachusetts ordered her execution, and thus inflicted a stain that can never be erased from the annals of the jurisprudence of the State. . . . On the evening of the day of the execution, the "body was examined, as the prisoner had requested, and a prefect male foetus of the growth of five months was taken from her"—Henry I. Bowditch. The Young Stethoscopist. New York, Hafner Publishing Company, 1964, p. 245. (Original publication, 1846.)

. . . that art without science is not slow to degenerate into routine. That hackneyed scepticism, which people so willingly oppose to all progress of the human mind, is a comfortable pillow for lazy heads; but the period in which we live allows no time for falling asleep.—J. M. Charcot. Clinical Lectures on Senile and Chronic Diseases. London, The New Sydenham Society, 1881, p. 20.