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both the behavior pattern and the occurrence of coronary thrombosis were related to constitutional differences. Furthermore, the features composing this behavior pattern are indistinct from those said to characterize patients prone to hypertension and peptic ulcer. The same features are not descriptive of a host of other patients who suffer acute coronary thrombosis. Most of the studies that have related a characteristic tense personality and an aggressive competitive pattern of behavior with coronary thrombosis have been made in large urban centers where the bulk of patients, coronary or otherwise, satisfy that description.

The increased incidence of coronary thrombosis in the past few decades, attributed to the physical and emotional stress of modern, competitive society may be better explained, for the most part, by changes in modern diagnostic terms, greater frequency of examination, improved diagnostic skill and better diagnostic equipment of the examining physician, all of which also tend to yield a greater incidence of diagnosis of coronary thrombosis in the better-educated, in those in the higher socioeconomic classes, and in those living in cities with large medical centers.

All efforts to relate emotion and effort to the occurrence of coronary thrombosis are hampered by lack of knowledge of the thrombotic process in vivo, as distinguished from in vitro coagulation, as well as of the mechanism by which emotion and physical effort might induce such thrombosis. Although emotion may stimulate endocrine and neurochemical secretions such as epinephrine, norepinephrine, serotonin, acetylcholine, vasopressin, and corticosteroids, there have been inconsistent or contradictory reports of their effects on blood coagulation, and their relevance to human thrombogenesis and thrombolysis is not established. It has been suggested that physical and emotional stress, by raising blood pressure, may rupture capillaries and induce intimal hemorrhage and coronary thrombosis. That such elevations of blood pressure are capable of rupturing capillaries or that they occur frequently just prior to coronary thrombosis has not been demonstrated.

There appears to be no satisfactory basis to warrant the acceptance of a causal relationship between effort and emotion and coronary thrombosis, but neither is there a scientific basis for excluding such a possible connection. So long as the physician is aware that there is inadequate evidence for or against their causal relationship and that his therapeutic recommendations in this regard are empirical and intuitive, there can be no serious criticism of prescriptions of moderation in physical activity and manner of living. Such recommendations may even be beneficial whether or not a reduction in the incidence of coronary thrombosis can be demonstrated.

CHARLES K. FRIEDBERG

Fulness of Life

are similar to those of valvular or subvalvular stenosis. Specialized diagnostic studies, such as those used in the present case, are available and have been thoroughly reviewed by Dotter et al. With careful evaluation of all patients with aortic stenosis supravalvular lesions will be found with increasing frequency.

Summary

Stenotic lesions in the aortic valve region may be acquired or congenital, and may be valvular, subvalvular, or supravalvular in location. As more of these patients are offered the benefits of surgical correction, cases of supravalvular aortic stenosis are being reported with increasing frequency. At least seven previous cases have been corrected successfully and another is reported.

The diagnosis of supravalvular aortic stenosis usually cannot be made on clinical grounds alone. Definitive diagnostic technics are available, however, and allowed accurate delineation of the lesion in the case reported. Surgical correction consists of enlarging the aortic lumen in the area of supravalvular constriction. This usually is possible by longitudinal aortotomy through the area of constriction followed by patch angioplasty, as employed in this case in conjunction with modified endarterectomy. In most instances of supravalvular aortic stenosis, the valve itself is perfectly normal, and total correction is possible if the correct diagnosis is made.

References


Boerhaave

Boerhaave lectured five hours a day; his hospital contained only twelve beds, but by Sydenham's method he made of it the medical centre of Europe.—Sir Andrew Macphail (The Source of Modern Medicine B.M.J., 1933). The Quiet Art: A Doctor's Anthology. Compiled by Dr. Robert Coope. Edinburgh & London, E. & S. Livingstone Ltd., 1932, p. 62.
LEFT ATRIAL ECTOPIC RHYTHM


Hospice

Here at whatever hour you come, you will find light and help and human kindness.—(Inscription on the lamp to light his patients to the hospital quay when coming down the river to Dr. Albert Schweitzer's hospital at Lambarene.) The Quiet Art: A Doctor's Anthology. Compiled by Dr. Robert Coote. Edinburgh & London, E. & S. Livingstone Ltd., 1952, p. 219.

Conjectures and Some Conclusions

Contractions cease on the passage of a spark, if either the nerve does not project beyond the muscles corresponding to it, and the contiguous parts, or if it does project, if another conductor be applied thereto, which is directed as far as to the muscles or to their conductors.

But indeed, although this hypothesis and comparison present no slight appearance of truth, nevertheless there are some things which seem not slightly to oppose them. For either nerves are of an insulative nature, as some surmise, and cannot then perform the function of conductors; or they are conductive: and how then could it be that the electric fluid should be contained within them and not be permitted to escape and diffuse to neighboring parts, not without great detriment surely of muscular contractions?

But this inconvenience and difficulty will easily be met by him who imagines the nerves so constituted that they are hollow within, or composed of some material suitable for conveying electric fluid, but externally they are either oily or are fused with some other substance which prevents the effusion and dissipation of the said electric fluid running through them. Such a structure indeed, and that composition of the nerves, will bring it about that they can perform both functions, namely of conducting the neuro-electric fluid and at the same time of avoiding the effusion thereof, and will be admirably accommodated both for the animal economy and for experiments; if indeed the animal economy seems always to demand spirits forced within the nerves; but experiments demonstrate that the nerves consist chiefly of oily substance.

For not only a large amount of oil is obtained by distillation from nerves, and far greater than from muscles, but as a greater quantity of inflammable gas was produced from them by us by a newer method than it was ever possible to elicit from any other part of the animal, and this gas was of such a nature that, when ignited, it emitted a more vivid, purer, and long-lasting flame than the inflammable gas derived from other parts is wont; surely this is no slight indication of more abundant oily substance in nerves.—Luigi Galvani. Commentay on the Effect of Electricity on Muscular Motion. Translated by Robert Montraville Green, M.D. Cambridge, Massachusetts, Elizabeth Licht, Publisher, 1953, p. 64.

Claude Bernard and Medical Science

Not until after the turn of the century did the movement which Claude Bernard had foreseen make itself felt. To-day it is well established and should be generally recognized. The result has already been a remarkable increase of experimental investigation and of rational theorizing in the clinic. For the first time mathematics, physics, chemistry and physical chemistry, as aids to physiology, have passed into the hospitals. I believe that, for the reasons which Claude Bernard has explained, this will long remain the way of medical progress and that we have now definitely entered upon the epoch of experimental medicine.—L. J. Henderson. Introduction. Claude Bernard, M.D. An Introduction to the Study of Experimental Medicine. New York, The Macmillan Company, 1927, p. xi.

On Science and Culture

In man's history the sciences make changes which cannot be wished away and cannot be undone. Let me give two quite different examples. There is much talk about getting rid of atomic bombs. I like that talk; but we must not fool ourselves. The world will not be the same, no matter what we do with atomic bombs, because the knowledge of how to make them cannot be exorcised. It is there; and all our arrangements for living in a new age must bear in mind its omnipresent virtual presence, and the fact that one cannot change that. A different example: we can never have again the delusions about the centrality and importance of our physical habitat, now that we know something of where the earth is in the solar system, and know that there are hundreds of billions of suns in our galaxy, and hundreds of billions of galaxies within reach of the great telescopes of the world. We can never again base the dignity of man's life on the special character in space and time of the place where he happens to live.

These are irreversible changes; so it is that the cumulative character gives a paradigm of something which is, in other respects, very much more subject to question: the idea of human progress. One cannot doubt that in the sciences the direction of growth is progress. This is true both of the knowledge of fact, the understanding of nature, and the knowledge of skill, of technology, of learning how to do things. When one applies this to the human situation, and complains that we make great progress in automation and computing and space research but no comparable moral progress, this involves a total misunderstanding of the difference between the two kinds of progress. I do not mean that moral progress is impossible; but it is not, in any sense, automatic. Moral regress, as we have seen in our day, is just as possible. Scientific regress is not compatible with the continued practice of science.—J. Robert Oppenheimer. "On Science and Culture." Encounter, October, 1962, p. 3.
There is a significant interbranch relationship within the coronary system. The atherosclerotic process starts earliest in the left anterior descending branch of the coronary arteries. The extent of correlation is more marked between the two branches of the left coronary artery than that of either of them with the right coronary artery. The interbranch relationship in the cerebral arterial bed also shows a significant correlation. Basilar artery shows the maximum atherosclerosis, next in order being middle cerebral artery; the postcerebral artery shows much less affliction to the atheroma and the anterior cerebral artery exhibits a high degree of freedom.

References

Self Revelation

To write an article of any sort, is, to some extent, to reveal ourselves. Hence, even a medical article is, in a sense, something of an autobiography.—John Chalmers Da Costa (Selected Papers and Speeches, Philadelphia, W. B. Saunders Co., 1931). The Quiet Art: A Doctor's Anthology. Compiled by Dr. Robert Coope, Edinburgh & London, E. & S. Livingstone Ltd., 1952, p. 237.
sus. An illustrative case is presented which emphasizes the special tests that are necessary to establish the diagnosis. Finally, the successful surgical correction of this abnormality is described.

Acknowledgment
The authors wish to acknowledge the significant contributions of Dr. Leonard Leight (Department of Medicine) and Dr. Lawrence A. Davis (Department of Radiology) in the diagnosis and successful treatment of this child.

References

The "Commentarii" of William Heberden
Very few of Heberden's manuscripts have survived... The original Latin manuscript of the "Commentarii" is preserved in the Royal College of Physicians. This library also has the manuscript of his Goulstonian Lecture of 1749... Some of his letters are preserved in the British Museum and the Royal College of Surgeons. To this short list may be added the three volumes of manuscripts found in South London in 1927.

The material in these three volumes throws no new light on the details of his life, but confirms the indications given in the "Commentarii" of his methods of work, and fills in the details of a broad picture of a man intensely interested in the practical side of medicine. The moral essays and the translations found in one of these volumes are a revelation of his interests and mode of thought outside of medical channels. The volume on strictly medical subjects, which must antedate by many years his final opinions as expressed in the "Commentarii," shows his power of observation, assimilation and constructive thought in matters medical.—Prefatory Essay, by LEROY CRUMMNER. WILLIAM HEBERDEN. An Introduction to the Study of Physic. New York, Paul B. Hoeber, Inc., 1929, p. 33.

The Hazards of Progress

The greatest risk that confronts us is not precisely unawareness of new discoveries and the latest findings. No, it is the slow breaking down of the rigour of our scientific method which was devised to ensure certain bases for our knowledge and to demand proofs before admitting the truth of what is new. It is the risk of forgetting Cartesian doubt, that doubt which has been the backbone of our scientific posture. The flood of medical literature not infrequently impedes serene reflection and drowns critical judgement. What we gain in erudition we lose in wisdom.

There are yet other risks. Those prodigies of technique which fill us with enthusiasm and which all too easily deceive us, sometimes cause us to confound the delicacy of the procedure with the rigour of the method. The complicated and wonderful instrument becomes both an aid and a menace. Furthermore there is the heady speed at which we live and the contagion of enthusiasm which finally produces collective illusions and turns us into victims of fashions. Who can doubt that we are suffering these things? It is enough to remember the number of drugs that only yesterday filled the magazines with their flattering results; everybody used them. And today? Who remembers their names?—Dr. IGNACIO CHÁVEZ. Speech delivered at the Inaugural Ceremony of the IV World Congress of Cardiology. Universidad Nacional Autónoma de México, México, D.F., 1962, p. 7.
Reinforcement, through continued drill and critical appraisal, is essential. If it cannot be provided, then one can anticipate a relatively rapid decay of what has been acquired.

But the point I hope to make is far more general than this course or this outcome. The point is that much of the time we depend upon our own feeling, or that of colleagues and participants to determine whether the learning we aimed for has in fact occurred. An equally frequent method is one of nose counting; if a lot of people attend, it must have been good. Neither is adequate. We must become more sophisticated and reject these methods in education as we have discarded them in the other areas of our professional interest. There are better ways and we had better learn them. We can no longer afford to engage in wheel spinning; time is too precious, the world is moving too fast.

It is entirely fitting for us to take pride in medical education, particularly as it has developed in the busy and productive half-century since Abraham Flexner took us to task. He urged with force and wisdom that our educational programs be based upon research in the basic medical sciences. The incredible rewards that have attended this advice are staggering. But even as we have advanced, so has pride in our accomplishments led to a measure of prejudice about the propriety of what we are doing. It is said that yesterday’s radical is today’s conservative and tomorrow’s reactionary. Where do we now fall on this continuum? We have been willing to engage in manipulation of hours and courses and methods, but we have not re-examined the fundamental principles upon which our educational programs are built for more than 50 years. Surely it is time to put aside pride and prejudice alike, to undertake a re-examination of education in medicine in the manner of scientists probing the unknown, not of artists refashioning the familiar. Neither we nor society can afford anything less.

A Teacher’s Ideals

In beginning teaching twenty and more years ago, I determined that the basis of what I taught should be that which I myself had seen and proved to be true. A second ideal that I have striven hard to attain is simplicity in teaching; this was not so easy during the years in which my work lay largely amongst pulse and galvanometric curves. But I have become more and more convinced of the need for simplicity; and it was apparent that little of the graphic work could profitably be taught to men entering practice, whose foremost interest must always be in observations they themselves can make upon their patients.—Sir Thomas Lewis. Diseases of the Heart. New York, The Macmillan Company, 1933, p. v.
Ulc er enlarges gradually but usually does not become much larger than 1 cm. in diameter (fig. 7). Pain is not a prominent feature of the ulcer associated with blood dyserasias. It is probable that injury is often an initiating factor but not enough cases of this type have accumulated to know the real incidence of initiation by injury. The ulcers are extremely resistant to treatment, but most of them will heal eventually.

Ulc erating Neoplasms (Epithelioma)

Epitheliomas of the leg are rare, and it is probably because of this that the ulcers are so often mistaken for stasis ulcers that occur frequently on the leg. Ulcerating epitheliomas usually develop at the site of an old injury but especially in scars from old radiation burns, in healed lacerations, and in areas of senile keratosis. Occasionally one will develop in an area of apparently previously normal skin. There is no typical or usual site. The initial lesion may be a discrete, pea-sized white nodule or an area of red, sealy skin. A characteristic feature is the slow enlargement of the initial lesion and in some cases a gradual progression to a superficial ulcer. The ulcer may become deep, eventually involving the bone. A typical ulcer has a telangiectatic border and in the leg, where gravitational factors are important, some purpuric reaction in the surrounding skin (fig. 8). The edges usually are rolled, shiny and white, or pale. A brown crust may cover the center. The lesion that has been present for several months may be of any size, but, in the leg, it is usually 2 or 3 cm. in diameter. Pain is not a prominent feature, and some ulcers are entirely painless. They do not respond to conventional treatment for the usual type of leg ulcer although some may undergo incomplete, spontaneous healing and involution in the center. The diagnosis may be established by biopsy.

Relevant References


The Power of Prophesy

No man is a true prophet otherwise than through the possession of such intimate knowledge of a subject that he is able to say, “Thus matters must develop.” Such was Claude Bernard’s prophecy of the future of his own science. His understanding of physiology had become so perfect that the future could not be wholly doubtful. He knew where the path must lead.—L. J. Henderson. Introduction. Claude Bernard, M.D. The Introduction to the Study of Experimental Medicine. New York, The Macmillan Company, 1927, p. ix.