Rewards of a Scientist

Though the scientific explorer has no prospect of becoming rich in the worldly sense, as a result of his labors, he certainly enjoys a rich life. The enthralling pleasures of discovery, the opportunity to do what he would rather do than anything else in the world, the sense of security in his academic position, the freedom for study and investigation, the world-wide friendships, the homage from learned societies, the assurance that his efforts in teaching and seeking have social value—all these satisfactions are his. No man could ask for better recompense.—WALTER B. CANNON, M.D. The Way of An Investigator. New York, W. W. Norton & Company, Inc., 1945, p. 214.
walled, functions as a single ventricle. The leaflets of the common AV valve are not continuous with those of either the aortic or pulmonic valves. An intramural opening (0.3 cm. in diameter) below the aortic valve connects the systemic ventricle to a rudimentary, smooth-walled chamber below a stenotic dome-shaped, unicusp, unicommissural pulmonic valve. The pulmonary trunk is hypoplastic. The aortic valve is located on the same plane and directly to the left of the pulmonary valve. The aorta arises anteriorly and does not cross the pulmonary trunk in its ascent. A small patent ductus arteriosus, which is connected to the right pulmonary artery, is present. The pressure in the systemic ventricle was recorded as 70/5 mm. Hg and the peripheral arterial oxygen saturation was 58 per cent. In summary, there is total anomalous pulmonary and systemic venous drainage, persistent common atrioventricular canal, common ventricle, transposition of the great vessels, stenotic subpulmonary outflow tract with pulmonic valvar stenosis, patent ductus arteriosus, right aortic arch, absent coronary sinus, and anatomic double right atrium.

References

Figure 4
This drawing demonstrates partial situs inversus, symmetrically lobed lungs, and abnormal systemic and pulmonary venous connections in the patient described. The largest lobe of the liver is on the left, the stomach and tail of the pancreas, on the right. The gallbladder is in the midline, and the spleen is absent. The colon and appendix are normally located but the mesenteric attachments of the small intestine are abnormal.

Amid the racket and hurly-burly few of us have the chance to warm both hands at the fire of life.—Sir William Osler. Aphorisms From His Bedside Teachings and Writings. Edited by William Bennett Bean, M.D. New York, Henry Schuman, Inc., 1950, p. 81.


A Great Man's Opportunities

Hippocrates himself practised only in little towns, not one of which was of itself sufficient to support a single physician. Most of his observations were made in Thessaly and Thrace; and he names only small cities. Galen somewhere says that the smallest quarter in Rome contained more inhabitants than the largest town in which Hippocrates practised. It is, therefore, not the great number of patients, but the capacity for deriving all the possible information from each particular case, which tends to form the experienced physician.—Zimmermann (A Treatise on Experience in Physic, 1782). The Quiet Art: A Doctor's Anthology. Compiled by Dr. Robert Coope. Edinburgh & London, E. & S. Livingstone Ltd., 1952, p. 50.


Modern medicine is a product of the Greek intellect, and had its origin when that wonderful people created positive or rational science.—Sir William Osler. Aphorisms From His Bedside Teachings and Writings. Edited by William Bennett Bean, M.D. New York, Henry Schuman, Inc., 1950, p. 78.
raphy in 22 per cent and overestimated in 17 per cent.

Only 11 per cent of the 89 segments showing coexisting focal involvement were graded the same by the two methods. The involvement was underestimated by arteriography in 86 per cent and overestimated in only 3 per cent.

In nonfocal disease, arteriographic estimation of severe luminal obstruction (grades 3, 3+, or 4) appeared to be markedly inaccurate. In focal disease, however, severity of stenosis did not affect the accuracy of arteriographic estimation.

In those segments of the coronary arteries deemed most susceptible technically to direct surgical intervention, arteriographic estimation of coronary stenosis or occlusion was least reliable. Therefore, too much dependence on the reliability of coronary arteriograms for the exact evaluation of coronary disease seems unwarranted at this time. More correlative studies incorporating necropsy specimens, surgical inspection, and increased experience in roentgenographic interpretation of coronary arteriograms are greatly needed.

References


“Aortic Insufficiency”

Two of the infectious scourges of Dublin in the early eighteen hundreds were typhoid and typhus fevers. These were first differentiated on clinical grounds by another giant of the Irish School, Dominic Corrigan (1802-1880). Although his long career was studded with honors, and crowned with a baronetcy, Corrigan’s name is immortalized because of work done during his early twenties in a hospital of only six beds. By carefully selecting his patients for clinical investigation from Dublin’s sprawling slums, where syphilis was endemic, he was able to correlate the bounding “Corrigan pulse” with a “permanent patency of the aortic valve.”—K. M. Cahill, M.D. The Golden Era of Irish Medicine. The New England J. Med. 266: 545 (March), 1962.
CORRECTION OF ATRIAL SEPTAL DEFECT


The Etymology of Galvani

Etymologically and genealogically the name Galvani is of French Keltic or Gaelic origin. In the form of Galvain or Gauvain it was widely diffused during the early medieval centuries through Brittany and Normandy. Thence by Keltic migration it made its way to Greater Britain; to Lesser Britain in the form of the Irish Galvin and Gavin; and then to Scotland in the form of Gawain. The most famous bearer of the name in this Scottish form was of course Gawain, the son of King Lot of Lothian and Orkney, one of the most celebrated heroes of King Arthur's Round Table. Finally at the Norman conquest of Sicily in the eleventh century, the name and heritage were transferred to Italian soil and there became established as Galvani. It is interesting that there is this hereditary and linguistic link between Arthurian romance and this pioneer of electricity.—Luigi Galvani. Commentary on the Effect of Electricity on Muscular Motion. Translated by Robert Montraville Green, M.D. Cambridge, Massachusetts, Elizabeth Licht, Publisher, 1953, p. 1.
Giovanni Battista Morgagni, the Founder of Pathologic Anatomy

Giovanni Battista Morgagni was born on February 25, 1682. His birthplace was Forlì, the capital of a papal province in northern Italy called Romagna, from the ancient Romandiola, the military army of the Roman legions.

After attending l’Accademia de’Filigrati, a preparatory school in his native town, Morgagni enrolled, at fifteen years of age, in the Medical School of the University of Bologna, which at that time was in its waning glory. After four years of dedicated study at the University of Bologna, Morgagni received both the degree of Doctor of Medicine and that of Doctor of Philosophy.

After graduation, not yet twenty-one years of age, Morgagni was asked to assume Valsalva’s teaching obligations at the University of Bologna while Valsalva was in Parma. Morgagni’s infinite enthusiasm for his work made him a leader and a moving spirit among the medical students and young graduates. Thus, he was interested in and became president of the Academia inquietorum, which, literally translated, means “Academy of the Restless.” The principle governing the Academy was that scientific truth should be based on analytic observation rather than on empirical theorizing and quotations from the classics.

It was to the “restless” that Morgagni presented his first original essays, soon to be published under the title, Adversaria anatomica (1706)— adversaria being the Latin name for notebooks. This marked the beginning of his scholarly career. The first collection of anatomical observations was followed by five more, with the last one coming thirteen years later.—C. G. Tedeschi, M.D. Giovanni Battista Morgagni, The Founder of Pathologic Anatomy: A Biographic Sketch On the Occasion of the 200th Anniversary Of the Publication Of His “De sedibus et causis morborum per anatomen indagatis.” The Boston Medical Quarterly 12: 113, 1961.
Acknowledgment

The authors are indebted to L. George Vesay, M.D., of Salt Lake City, who made the correct diagnosis and referred the patient to us. We are also indebted to Harrison Latta, M.D., of the Department of Pathology, University of California Medical Center, for his invaluable aid in evaluating the pathologic material.

References


Osler's Personal Ideals

I have had three personal ideals. One, to do the day's work well and not to bother about tomorrow. The second ideal has been to act the Golden Rule, as far as in me lay, toward my professional brethren and towards the patients committed to my care. And the third has been to cultivate such a measure of equanimity as would enable me to bear success with humility, the affection of my friends without pride, and to be ready when the day of sorrow and grief come to meet it with courage befitting a man.—Osler. The Quiet Art: A Doctor's Anthology. Compiled by Dr. Robert Coope. Edinburgh & London, E. & S. Livingstone Ltd., 1952, p. 94.


27. GERBODE, F.: Personal communication.


Three Principles

Not to take authority when I can have facts; not to guess when I can know; not to think a man must take physic because he is sick.—OLIVER WENDELL HOLMES. The Quiet Art: A Doctor's Anthology. Compiled by Dr. ROBERT COOPE. Edinburgh & London, E. & S. Livingstone Ltd., 1952, p. 101.
MITRAL INSUFFICIENCY FROM RUPTURED CHORDAE TENDINEAE

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Principle of Inductive Reasoning

Once more we emphasize that the principle of mathematical induction is quite distinct from empirical induction in the natural sciences. The confirmation of a general law in any finite number of cases, no matter how large, cannot provide a proof for the law in the rigorous mathematical sense of the word, even if no exception is known at the time. Such a law would remain only a very reasonable hypothesis, subject to modification by the results of future experience.—RICHARD COURANT and HERBERT ROBBINS. What is Mathematics? An Elementary Approach to Ideas and Methods. England, Oxford University Press, Tenth Printing, 1960, p. 10.


Traditional Remedies

Digitalis is a notable example. In its early days it was a true old wives' cure for dropsy. Withering, in 1776, having learned from an old Shropshire woman of the virtues of the foxglove, tried it in his practice, and was convinced of its value. But he no more knew how it cured than he knew that dropsy was not a disease but a symptom of many diseases. Half a century passed before Bright drew attention to the association of renal disease with albuminous urine, and so paved the way for a distinction between renal and cardiac dropsy. And we can afford to smile at Withering's disappointment at the failure of his foxglove leaves to cure a case of ovarian cyst—then regarded as a form of dropsy. The final demonstration of the specific effect of digitalin and certain allied alkaloids upon the disorder of cardiac rhythm which we now know as auricular fibrillation belongs to the present century.—Dr. Maurice Shaw (Medical Facts and Fallacies, BM. J. 1936). The Quiet Art: A Doctor's Anthology. Compiled by Dr. Robert Coope. Edinburgh & London, E. & S. Livingstone Ltd., 1952, p. 137.
The Effects of Atmospheric Electricity on Muscular Motion

Having discovered the effects of artificial electricity on muscular contractions which we have thus far explained, there was nothing we would sooner do than to investigate whether atmospheric electricity, as it is called, would afford the same phenomena, or not: whether, for example, by employing the same devices, the passage of lightning, as of sparks, would excite muscular contractions.

Therefore we erected, in the fresh air, in a lofty part of the house, a long and suitable conductor, namely an iron wire, and insulated it, and to it, when a storm arose in the sky, attached by their nerves either prepared frogs, or prepared legs of warm animals.

The thing went according to our desire, just as in artificial electricity; for as often as the lightning broke out, at the same moment of time all the muscles fell into violent and multiple contractions, so that, just as the splendor and flash of the lightning are wont, so the muscular motions and contractions of those animals preceded the thunders, and, as it were, warmed of them.—Luigi Galvani. "Commentary on the Effect of Electricity on Muscular Motion." Translated by Robert Montraville Green, M.D. Cambridge, Massachusetts, Elizabeth Licht, Publisher, 1953, p. 36.


The Creative Environment

Every definite substance, whether inorganic, organic or organized, is autonomous; that is to say, it has characteristic properties and exhibits independent action. Nevertheless, each one of these bodies is inert, that is, it is incapable of putting itself into action; to do this, it must always enter into relation with another body, from which it receives a stimulus. Thus every mineral body in the cosmic environment is stable; it changes its state only when the circumstances in which it is placed are rather seriously changed, either naturally or through experimental interference. In any organic environment, the substances created by animals and vegetables are much more changeable and less stable, but still they are inert and exhibit their properties only as they are influenced by agents outside themselves. Finally, anatomical units themselves, which are the most changeable and unstable of substances, are still inert, that is, they never break into vital activity unless some foreign influence invites them. A muscle-fibre, for instance, has the vital property peculiar to itself of contracting, but this living fibre is inert in the sense that if nothing changes in its environmental or its inner conditions, it cannot bring its functions into play, and it will not contract. For the muscular fibre to contract, a change must necessarily be produced in it, by its coming into relation with a stimulation from without, which may come either from the blood or from a nerve.—Claude Bernard, M.D. An Introduction to the Study of Experimental Medicine. New York, The Macmillan Company, 1927, p. 78.
Theory and Practice

Sagacity in practice, the art of applying so much of larger theory as may be useful and of combining it readily with current empirical rules, a good memory for symptoms, and a quickness in giving what painters call true values to each symptom of a group are qualities partly innate, partly learned in the wards, partly in the world. But even these great qualities are of less effect if associated, as too often they are, with unverified premises and random speculations.—CLIFFORD ALLBUTT (B.M.J., 1897). The Quiet Art: A Doctor's Anthology. Compiled by DR. ROBERT COOPE. Edinburgh & London, E. & S. Livingstone Ltd., 1952, p. 17.