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Myocardial Infarction
Well of Ignorance

A systematic review of our understanding of myocardial infarction and its management produces a startling picture of ignorance. Even the classic formulation that coronary occlusion, thrombotic or otherwise, precedes ischemic necrosis which is responsible for the life threatening manifestations of the disease is now clearly inadequate. We are constrained to admit that we do not understand the cause of myocardial infarction in the sense that we do not usually know what converts coronary artery disease into myocardial infarction.

We do not know the natural course of myocardial infarction with sufficient certainty to judge the effect of even major interventions.

We have little insight into the factors which determine the course of the disease. What are the metabolic determinants of death or survival of the ischemic cell? We really don’t know what kills the cell!

... We are very limited in our ability to make a quantitative diagnosis—that is to determine the size of the infarction, the adequacy of the primary and collateral circulation and the state of other body systems which are relevant.

I do not believe that a single order which we write on the chart of the patient with myocardial infarction rests upon as sound a scientific basis as the orders we write in the management of diabetic acidosis or acute infectious disease.

... No one knows when the negative effects of restricted activity may outweigh the advantages.

... Nothing is known of the mechanism of this complication (electromechanical uncoupling as a terminal phenomenon) and to my knowledge treatment has been uniformly unsuccessful.


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**Mystic Insight**

Then said a teacher, Speak to us of Teaching.

And he said:

No man can reveal to you aught but that which already lies half asleep in the dawning of your knowledge.

The teacher who walks in the shadow of the temple, among his followers, gives not of his wisdom but rather of his faith and his lovingness.

If he is indeed wise he does not bid you enter the house of his wisdom, but rather leads you to the threshold of your own mind.

The astronomer may speak to you of his understanding of space, but he cannot give you his understanding.

The musician may sing to you of the rhythm which is in all space, but he cannot give you the ear which arrests the rhythm nor the voice that echoes it.

And he who is versed in the science of numbers can tell of the regions of weight and measure, but he cannot conduct you thither.


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Circulation, Volume XXXVI, August 1967


Anatomy Lesson—Quain, 1844

[The drawings from nature and on stone by Joseph MacLise, Esq. Surgeon]
Healthy Kidneys—Superb Servants

It is no exaggeration to say that the composition of the blood is determined not by what the mouth takes in but by what the kidneys keep: they are the master chemists of our internal environment, which, so to speak, they manufacture in reverse by working it over completely some fifteen times a day. When, among other duties, they excrete the ashes of our body fires, or remove from the blood the infinite variety of foreign substances that are constantly being absorbed from our indiscriminate gastrointestinal tracts, these excretory operations are incidental to the major task of keeping our internal environment in an ideal, balanced state. Our bones, muscles, glands, even our brains, are called upon to do only one kind of physiological work, but our kidneys are called upon to perform an innumerable variety of operations. Bones can break, muscles can atrophy, glands can loaf, even the brain can go to sleep, without immediately endangering our survival; but should the kidneys fail to manufacture the proper kind of blood neither bone, muscle, gland nor brain could carry on.—Homer W. Smith: *From Fish to Philosopher*. Boston, Little, Brown and Company, 1953, p. 4.
of bigeminy, and theories other than conduction disturbances have been presented to explain this phenomenon.

Acknowledgment
This study was made possible by a grant to one of us (L. S.) from the Wellcome Foundation, London, to whose Trustees sincere thanks are expressed. We would like to express our thanks to Dr. L. Pozzi for permission to publish this case. We are indebted to the Photographic Department, Department of Medicine, University of the Witwatersrand, for the photographic reproductions.

References

100 Years Ago—Correspondence—Lancet—Heart Disease and Tobacco

Few of us can doubt that the habit of indiscriminate smoking has led to much mischief, especially when indulged in by immature and etiolated youths, who nauseate themselves with cheap cigars and English tobacco. An Irish registrar, who is therefore we presume a medical man, calls attention to the number of sudden deaths from heart disease, which are thought to be much more common now than they were thirty or forty years ago, and he raises the question whether the now almost universal use of tobacco has anything to do with this. He thinks it has; but it strikes us as being an exceedingly difficult theory to establish satisfactorily. The mere fact of the increased consumption of tobacco would hardly be a sufficient ground to go upon, unless it could be proved by experiment upon a given number of persons with heart disease that the non-smokers of this class were (coeteris paribus) less liable to sudden death than the smokers.—Anonymous: Heart Disease and Tobacco. Lancet 2: 119, 1867.

Recordings by Einthoven circa 1900
(Courtesy Dr. George Fahr)


**“Cardiac Asthma”—Pointed Remarks by MacKenzie (1911)**

Sir,—I had hoped that Sir Clifford Allbutt would have explained what he meant by the term “asthma,” and would have shown how the condition I had described under the term “cardiac asthma” failed to come within the limits of his definition. I have tried to comprehend his meaning, and I gather that he assumes that the form of dyspnoea which I had called “cardiac asthma” differs from that “assemblage and procession of signs and symptoms, positive and negative, recurring with fair uniformity,” which he looks on as characteristic of asthma.

I have had opportunities of studying the condition during attacks in ordinary asthma and in cardiac asthma, and I could detect no dissimilarity. Thus, the patients’ sensations, their aspect and attitude, the manner of breathing, the onset and offset of the attack, the response to remedies, were identical. . . .

I have seen only a few cases during an attack, and those I saw when I was engaged in general practice, and was summoned in the middle of the night because of the patient’s distress. The information derived from seeing these cases has enabled me to appreciate the condition in patients suffering from these attacks whom I have not actually seen during an attack.

Sir Clifford Allbutt puts forward the suggestion that it is possible he may never have seen such a case, and I am disposed to think that this is probably the reason why he disagrees with the term “cardiac asthma.” . . .

When one reflects on the rarity of these cases, and that the attacks usually occur in the night, and the fact that the teaching physician is not likely to be called out at night to see a breathless man, it is not surprising that many physicians have no experience of this and other forms of cardiac dyspnoea.—J. MACKEnZIE: Correspondence: Cardiac Asthma. Brit Med J \textbf{2}: 1231, 1911.