

This Week's Citation Classic

Cohen L S, Elliott W C, Klein M D & Gorlin R. Coronary heart disease: clinical, cinearteriographic and metabolic correlations.
Amer. J. Cardiol. 17:153-68, 1966.

Sixty patients with coronary artery disease were studied by selective coronary cinearteriography and coronary sinus catheterization, with measurement of coronary flow, oxygen and lactate extraction at rest and during a stressful state. Coronary flow and coronary oxygen extraction patterns did not distinguish patients with coronary artery disease from normal subjects, whereas myocardial lactate production was seen as a hallmark of coronary artery disease in 73% of subjects. [The *SCI*[®] indicates that this paper has been cited 188 times since 1966.]

Lawrence S. Cohen
Yale University School of Medicine
New Haven, CT 06510
January 24, 1978

"The technique of selective coronary arteriography was introduced in the United States in the early 1960s. William C Elliott and I joined Richard Corlin's laboratory, Peter Bent Brigham Hospital and Harvard Medical School, in 1962 as research fellows. I recall the very first selective coronary arteriogram performed in that laboratory, as it took place in the fall of 1962, soon after we started the fellowship. Elaborate precautions were taken, including having a cardiac surgeon available should any mishap occur. The procedure went smoothly, however, and it launched an investigation over the next two years in which a series of patients with coronary heart disease were studied.

Corlin's leadership in the laboratory moved us toward investigating not only the arteriographic profile of the coronary arteries but also correlating these changes with simultaneous hemodynamic, and biochemical data from the patient. It was not unusual for a catheterization to take upwards of four hours in those early days.

"By 1964 we had studied over 50 patients, and it appeared worthwhile to collate these data to determine what some of the clinical, electrocardiographic, hemodynamic, and biochemical correlations were. The observation that lactate production by the myocardium was the hallmark of the ischemic myocardium is an observation which has stood the test of time

"One amusing memory of this investigation will never be forgotten. It was 1965, and I had left the laboratory to join the National Heart Institute. Elliott remained in the laboratory to spend a third year and was working at the Harvard Student Infirmary on a Saturday afternoon. I travelled to Boston that weekend, and Corlin, Elliott and I were writing the paper in the infirmary. A Harvard undergraduate's weekend date came into the infirmary with a rapid heart arrhythmia. She did not know who the doctors treating her were and after her heart had gone back to a normal rhythm, she asked us to please write down what we had done for her so that she might check it out with her own doctor to make certain she had received the correct therapy

"I know that my associates in this collaborative effort feel equally pleased to see this early work cited for review "