Old "Strictly Posterior" Myocardial Infarction*

Konstantine S. Zakopoulos, M.D., F.C.C.P.** and Anthony Th. Tsatas, M.D.

Athens, Greece

The electrocardiogram here presented was taken from an 82-year-old woman suffering from carcinoma of the left breast. No previous history of heart disease could be ascertained from others, the patient herself being unreliable.

*From the Cardiovascular Laboratory, "Sotiria" Tuberculosis Sanatorium, Athens, Greece, and the Cardiovascular Research Unit, The University of Vermont College of Medicine, Burlington, Vermont.

**Assistant Professor of Pathological Physiology, Faculty of Medicine, Athens University. Director of the Laboratory at Sotiria Tuberculosis Sanatorium.

Clinical and x-ray examination were essentially negative. Two electrocardiograms recorded during her hospitalization were identical to that seen in Fig. 1. Completion of the study by taking esophageal and multiple thoracic leads anteriorly and posteriorly became impossible because of the patient's condition and the unexpectedly supervening death.

The electrocardiogram shows left axis deviation (AQRS=-30°) and horizontal electrical position of the heart with marked counterclockwise rotation.

Figure 1
This last is rarely found in normal persons and is considered to be present when a qR pattern begins in $V_2$; in such a case, lead $V_1$ shows an rs pattern.

Thus, the qR complexes with negative T waves present in the right precordial leads $V_1$, $V_{3R}$, $V_{4R}$ (Fig. 1) cannot be explained on the basis of the rotation concept.

Predominant R waves of 0.04 sec. duration in $V_1$ and contiguous right anterior chest leads with upright T waves and ST depression in the acute phase were found to be characteristic of "strictly posterior" myocardial infarction, if associated with:

(a) absence of WPW syndrome, complete right bundle branch block, right ventricular hypertrophy, vertical frontal plane electrical axis, and pathologic Q waves in the standard 12-lead electrocardiogram, and

(b) presence of Q waves of 0.04 sec. duration in an area posteriorly between the spine and the left scapula. Regarding the T wave, it was found to be upright (50 per cent), isoelectric (30 per cent), or inverted (20 per cent); however, it has been anticipated that upright T waves of acute posterior myocardial infarction might become isoelectric or inverted when the infarct heals.

On the other hand, the long term course of electrocardiographic changes was found to render the retrospective diagnosis of posterior myocardial infarction the more difficult the older the necrosis. Indeed, it was shown that Q wave regression increased to 77 per cent and disturbed repolarization (regression) increased to 88 per cent of the cases between the second and fifth year after infarction.

According to these considerations, the diagnosis of an old strictly posterior myocardial infarction seems to be justified in the present case, although on theoretical grounds and lacking vectorcardiographic studies the possibility of a "false right ventricular hypertrophy pattern" due to Wilson's central terminal error, leading to a false horizontal loop cannot be ruled out.

For reprints, please write Dr. K. S. Zakopoulos, Cardiovascular Research Unit, DeGoesbriand Memorial Hospital, The University of Vermont College of Medicine, Burlington, Vermont.

HISTOLOGY OF LUNG CANCER IN RELATION TO PROGNOSIS

The experience of 746 patients with lung cancer has been related to tumor histology. The survival rates in both surgical and nonsurgical cases indicate that squamous-cell carcinoma is associated with the best prognosis, oat-cell carcinoma with the worst prognosis, and undifferentiated carcinoma with a prognosis intermediate between these two. In the small proportion of cases of adenocarcinoma the survival rates after surgery were comparatively low. For clinical use, it is suggested that the labels "squamous-cell carcinoma" and "adenocarcinoma" be confined to well-differentiated tumors and that poorly differentiated tumors are best grouped together.


INTRODUCTION TO STUDY OF REPEATED MITRAL COMMISSUROTOMY

Repeated mitral commissurotomy is motivated by recurrent mitral stenosis or re-stenosis. Recent stenosis is but one of the numerous causes responsible for the deterioration of end-results in commissurotomy. Recurrent stenosis appears to result mainly from incomplete execution of the previously performed commissurotomy, although it does also involve electively calcified, rigid or sclerosed mitral valves or ones with subvalvular stenosis. Rheumatic recurrences have also been incriminated. Repeated mitral commissurotomy can be performed using the right or left auricular approach, but the majority of authors prefer to perform them as an open procedure or, better, using the transventricular dilator. The results of these operations are less encouraging than those of ordinary commissurotomy, in view of the immediate mortality rate and the lower cure rate.