20 of the 22 patients studied represents a much higher incidence of such bulges than we have observed in apex cardiograms from a large number of patients with coronary (ischemic) heart disease. It would appear likely that the discrete systolic bulge observed in the present series of patients was due to alterations in the time course of left ventricular depolarization associated with bilateral bundle branch block. If this is true, alterations in the time course of ventricular depolarization must be considered a cause of ventricular dyskinesia in addition to myocardial ischemia. It is of interest that apical systolic murmurs were audible in 14 of the 18 patients without valvular heart disease. Burch et al. have suggested that alterations in the time course of ventricular depolarization of the papillary muscles relative to activation of the free left ventricular wall may result in papillary muscle dysfunction and an associated systolic murmur of mitral regurgitation. It should be indicated that both the anterior and posterior divisions of the left bundle branch terminate in the anterolateral and posteromedial papillary muscles respectively. It would be expected that delayed or blocked conduction in either division would disrupt the integration of the contractile function of the free left ventricular wall and papillary muscle necessary to maintain the integrity of the mitral valve during ventricular systole.

Like the changes in the a wave and the diastolic filling wave amplitude, the alterations found in pre-ejection period duration, left ventricular ejection time, ejection time index and maximum rate of rise of left ventricular pressure reflected the clinical state of the patient rather than the presence of the bilateral bundle branch block. It would appear that localized areas of ventricular dyskinesia, as observed in the apex cardiogram, do not impair left ventricular contractility sufficiently to be reflected by relatively insensitive indirect methods.

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From the Writings of George E. Burch

The History, Physical Examination and Time

The solution to the problem of time and the shortage of physicians will be the training of many more master and dedicated clinicians, not an increase in the training of physicians' assistants. Acceleration in the training of physicians is not impossible if the defeatist attitude is discarded and proper plans developed. The wealth of America in all resources—facilities, raw material and intelligent people—is outstanding and has not yet been nearly exploited to full advantage. American medicine has not even begun to make use of the many women available for training as physicians.