

VENTRICULAR ARRHYTHMIAS IN ACUTE MYOCARDIAL INFARCTION

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Since the introduction of Coronary Care Unit (C.C.U's) early detection and treatment of different types of Ventricular Arrhythmias have attracted much interest. This has been based upon the assumption that certain types of ventricular premature beats are precursors of V.T. and V.F. It was also reported that aggressive treatment of these warning arrhythmias reduced the incidence of ventricular fibrillation. Although this was achieved to some extent, V.F. was not abolished.

There are however reports indicating that V.F. may occur without premonitory arrhythmias. It is shown that these warning Ventricular Arrhythmias occurred with equal frequency in patients who developed V.F. and those who did not develop V.F. It has also been shown that xylocaine in ordinary doses may not be able to prevent V.F. while suppressing the warning arrhythmias. These doubts regarding the specificity of warning arrhythmias received support with EL Sherif's report of 450 cases of Acute Myocardial Infarction. Warning arrhythmias were detected in 58% of 20 patients who developed P.V.F. But these warning arrhythmias were also noted in 55% of the remaining patients who did not develop V.F. Warning arrhythmias thus can be considered an unspecific phenomenon (1977).

Ventricular arrhythmias after experimental coronary ligation appears to occur in three distinct phases. The early phase begins within minutes after myocardial ischemia and lasts approximately 30 minutes (EL Sherif et al). They depend upon re-entry within the ventricular myocardium. The second phase begins 12-24 hours after the ligation and is analogous with the V. arrhythmias in the C.C.U. It depends upon enhanced automaticity. The 3rd phase manifest itself after several days of coronary occlusion and involve a re-entrant mechanism in the surviving myocardium (Lazzara et al 1977).

While arrhythmias of the early phase may have statistical prognostic significance they are less valuable markers for individual patient management. Several studies has shown that Ventricular arrhythmias occurring in the late of phase (Recovery) of Myocardial Infarction are important predictors of late sudden death.

Van Durme and Pannier (1976) noticed 12 sudden deaths in 150 survivors of Acute Myocardial Infarction having monthly ambulatory E.C.G. monitoring. Frequent VPC's showed a significant correlation with sudden death.

Thus at the present time much more insight has been gained into the characterization and localization of arrhythmias associated with Acute Myocardial Infarction. Search for an antiarrhythmic is going on which would abolish primary V.F. and late arrhythmias and thus sudden death in the survivors.