

172 MYOCARDIAL PERFUSION ABNORMALITIES IN PATIENTS WITH MITRAL VALVE PROLAPSE

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Twenty patients, 15 females and 5 males, ages 16-50 years (mean age-30) with ECHO documented MVP, had combined treadmill stress test (ST) and myocardial perfusion imaging (MPI). At peak exercise, 1 mCi of Tl-201 (Sn) chloride was injected i.v. and myocardial images were obtained in multiple views, using a gamma camera. The clinical, Echo-cardiographic, resting and stress EKG findings were analyzed independently and later correlated with MPI. In nine subjects, contrast coronary arteriography and ventriculography was performed.

Twelve subjects (60%) had abnormal stress MPI, showing decreased perfusion in the apical diaphragmatic and lateral wall of the left ventricle. Ten(90%) of these either had loud systolic click, angina-like pain or arrhythmia. Seven (58%) had abnormal resting EKG, and six (50%) had positive stress EKG. Nine (75%) of the 12 subjects with abnormal MPI had severe MVP on ECHO (4mm prolapse). In seven subjects where repeat Tl-201 MPI at resting was done, the same perfusion abnormalities were seen. All 9 subjects had normal coronary arteries and ventriculogram, except for findings of MVP. Of the 8 subjects with normal Tl-MPI, six (75%) were asymptomatic, two (25%) had abnormal resting EKG, none had abnormal stress EKG, seven (87%) had mild MVP on ECHO.

In conclusion, a high incidence (60%) of myocardial perfusion abnormalities are demonstrated in patients with severe MVP and normal coronary arteries. This study supports the hypothesis that decreased regional myocardial blood flow or abnormal cellular function occurs in MVP, and may offer an explanation for the clinical manifestation of this abnormality.

173 DIAGNOSTIC VALUE OF PYROPHOSPHATE SCINTIGRAPHY IN SURVIVORS OF PREHOSPITAL SUDDEN DEATH

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Prognosis of survivors of prehospital sudden cardiac death (PSD) has been shown to be related to the presence of acute myocardial infarction (AMI).

However, the diagnosis of AMI may be difficult because electrical defibrillation (ED) and cardiopulmonary resuscitation (CPR) may produce non-specific EKG and enzymatic changes (Ez). The possible role of PYP in improving diagnostic accuracy in PSD has not been clearly defined.

Thirty successfully resuscitated victims of PSD admitted to the CCU were evaluated with PYP using a portable bedside scintillation camera, Ez and EKG. Nine pts demonstrated (+) PYP(greater than 2+uptake) while 21 had negative (-) PYP. The total number of ED (400 joules) in both the (+) and (-) PYP groups were similar. In the 9 (+) PYP pts, 5 demonstrated transmural AMI by EKG; 1 CLBBB; and 3 non-specific ST-T changes. Conversely in the 21 (-) PYP pts, only 1 had transmural AMI by EKG; 5 CLBBB; and 15 nonspecific ST-T changes. Peak CPK, CPK-MB and LDH₁/LDH₂ enzyme values were significantly higher in the (+) PYP than (-) PYP groups (p<.50).

We conclude that ED and CPR do not affect the diagnostic accuracy of PYP and that PYP is beneficial in diagnosing AMI in survivors of PSD.