

P2747 : Prognostic implication of coronary flow reserve in diabetic and nondiabetic patients with negative dipyridamole stress echo by wall motion criteria

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Objectives: Aim of this prospective, multicenter, observational study was to assess the prognostic value of Doppler echocardiographic derived coronary flow reserve (CFR) in diabetic and nondiabetic patients with known or suspected coronary artery disease (CAD) and negative dipyridamole stress echo.

Methods: The study group consisted of 1130 patients (207 diabetics) with known (n=418) or suspected (n=712) CAD and negative stress echo by wall motion criteria. All underwent dipyridamole (up to 0.84 mg/kg over 6') echo with CFR evaluation of left anterior descending artery by Doppler. A value of CFR <2.0 was considered abnormal.

Results: CFR was normal in 821 (63%) and abnormal in 309 (27%) patients. During a median follow-up of 16 months, 98 events (8 deaths, 24 STEMI, and 66 NSTEMI) occurred. In addition, 89 patients underwent revascularization and were censored. Multivariable prognostic indicators were abnormal CFR (HR=4.95; 95% CI=3.26-7.50; p<0.0001), antianginal therapy at the time of testing (HR=1.96; 95% CI=1.29-2.98; p=0.002), age (HR=1.02; 95% CI=1.00-1.04; p=0.02), and resting wall motion abnormalities (HR=1.50; 95% CI=1.00-2.25; p=0.05). The 36-month event rate was lower (p<0.0001) for either diabetics and nondiabetics with normal CFR as compared to diabetics and nondiabetics with abnormal CFR (Figure).

Conclusion: CFR provides effective prognostic information in diabetic and nondiabetic patients with known or suspected CAD and negative dipyridamole stress echo. In particular, a reduced CFR is associated with worse outcome in both populations.

