

Prognostic value of pharmacologic stress echocardiography in diabetic and nondiabetic chest pain patients with intermediate-to-high threshold positive exercise electrocardiography

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Aims: To compare the prognostic value of pharmacologic stress echocardiography in diabetic and nondiabetic patients with chest pain and intermediate-to-high threshold positive exercise electrocardiography.

Materials and methods: 935 chest pain patients (131 diabetics) with ST-segment depression ≥ 1 mm on exercise electrocardiography at >75 watt workload underwent dipyridamole (n=786) or dobutamine (n=149) stress echocardiography and were followed-up for the occurrence of hard (death, infarction) and major events (death, infarction, late revascularization).

Results: During a median follow-up of 26 months, 158 events (51 deaths, 28 myocardial infarctions, and 79 late revascularizations) occurred: 34 in diabetics and 124 in nondiabetics (see Figure). Independent predictors of hard events were age, diabetes, and ischemia at stress echo. 5-year hard event rate was 24 % in patients with and 4 % in those without ischemia ($p < 0.0001$). Independent predictors of major events were age, diabetes, hypercholesterolemia, smoking habit, antianginal therapy at the time of testing, and ischemia at stress echo. 5-year major event rate was 46 % in patients with and 7 % in those without ischemia ($p < 0.0001$).

Conclusions: Stress echocardiography is effective in risk stratifying diabetics and nondiabetics with intermediate-to-high threshold ischemic exercise electrocardiography. However, major event rate associated with a non ischemic test is similar in diabetics and nondiabetics during the first year of follow-up, and markedly increased in the former thereafter.

