

Long-term Mortality Predictors of Patients Evaluated with Pharmacologic Cardiac Stress SPECT (PS-SPECT) for Suspicion of Chronic Coronary Syndrome

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Citation: *European Cardiology Review* 2023;18:e33. **DOI:** <https://doi.org/10.15420/ecr.2023.18.P016>

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Objective: Pharmacologic cardiac stress SPECT (PS-SPECT) is used for non-invasive evaluation and risk stratification of patients with suspected chronic ischaemic heart disease (IHD) unable to exercise. Aim of the study was to identify predictors of mortality in those patients.

Materials and methods: Retrospective study of 1.214 patients referred for PS-SPECT between 2010 and 2016 who completed a median follow-up of 3 years. Patients had a median age of 74 ± 10 years, 56% were women (56%), and had high prevalence of cardiovascular risk factors – diabetes (51%); arterial hypertension (86%); hypercholesterolaemia (60%); chronic IHD (38%) or peripheral artery disease (44%). Dipyridamole was used for stress in 89% of patients, dobutamine in 7% and a combination of dipyridamole and low-intensity exercise (Dip-Ex) in 4%.

Results: Global mortality was high at 1 year (5.5%) and at long-term follow-up (26.5%). Variables identified as independently related to

mortality in the multivariable analysis were age (OR 1.055, 95% CI [1.038–1.072]; $p < 0.001$), diabetes (OR 1.765, 95% CI [1.326–2.326]; $p = 0.001$) and moderate or severe ischaemia in the PS-SPECT (OR 2.545, 95% CI [1.730–3.742], $p < 0.001$).

Variables identified as protective factors were preserved ejection fraction by gated SPECT (OR 0.970, 95% CI [0.960–0.980]; $p < 0.001$), coronary angiography without significant stenosis (OR 0.349, 95% CI [0.154–0.788]; $p = 0.011$) and use of combined stress Dip-Ex (OR 0.344, 95% CI [0.127–0.930]; $p = 0.035$). Coronary angiography or revascularisation were not identified as protective factors.

Conclusion: Patients selected for PS-SPECT are a high-risk population with high mortality rates which depends on clinical characteristics and results of the PS-SPECT. □