VALIDATION OF THE APPROPRIATENESS CRITERIA FOR ROUTINE SPECT IMAGING AMONG ASYMPTOMATIC PATIENTS AFTER CORONARY ARTERY BYPASS SURGERY

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Background: The current ACC/AHA guidelines do not recommend testing asymptomatic (ASYMP) patients < 5 years after coronary artery bypass grafting (CABG) and deliver an ‘uncertain’ recommendation for testing among ASYMP patients ≥ 5 years after CABG. The purpose of this study was to examine these concepts in a large database with SPECT MPI following CABG for both symptomatic (SYMP) and ASYMP patients.

Methods: We identified 1983 patients who underwent SPECT MPI after CABG for clinical indications between ’98 - ’07 and followed for a mean duration of 7 ± 6 years. The impact of the presence or absence of symptoms at the time of SPECT MPI as a function of time (< or ≥ 5 years) and ASNC 17-Segment summed stress score (SSS) on the composite outcome of cardiac death/non-fatal MI was calculated using χ² and multivariable Cox regression analysis.

Results: During follow up, 272 cardiac events occurred. The annualized cardiac event rates were higher among SYMP as compared to ASYMP patients < or ≥ 5 years after CABG; however, ASYMP patients ≥ 5 years demonstrated a higher event rate as compared to SYMP patients < 5 years after CABG (2 % vs 1.4%, p=.01, figure 1A) and increased as a function of SSS in both SYMP and ASYMP patients (figure 1B). Age, exercise MPI, SSS, DM, hyperlipidemia, smoking, EF were independent predictors of cardiac events.

Conclusion: SPECT MPI predicts future coronary events in ASYMP patients following CABG. These results suggest referral for SPECT MPI among ASYMP patients ≥ 5 years after CABG should be considered appropriate.