mance of gated Thallium-201 (Tc) and Tc-99m sestamibi (MIBI) in 302 women, hypothesizing that advances in technology and imaging protocols would negate importance of radionuclide choice.

Methods: 3 experienced readers, blinded to all clinical information, scored 604 randomly presented non-gated and gated SPECT scans in 302 women - 152 imaged with Tc and 150 with MIBI. Patients were imaged using LEAP (Tc) or LEHR (MIBI) collimators, dual 80" detectors and weight-adjusted dosages of Tc (3-4.5 mCi) and MIBI (25-45 mCi). Tc images were acquired using a previously described time-adjusted acquisition according to counts from a pre-scan planar image. Body mass index (BMI) was 26±5 (range 16 - 47) and age 63±12 years. There were 101 (33%) low likelihood women and 201 had catherization 60 days (0.06 CI, 17% (range 3.0-4.5 mCi) and MIBI (25-45 mCi). Multivariate statistical analysis was performed for relative sensitivity, specificity, and specificity of the 2 radionuclides, after controlling for age, type of stress, BMI, CAD distribution, and image quality.

Results: Image quality (Tc vs MIBI) was excellent in 92% vs 90% (p<NS). Interpretive certainty improved for both tracers with gating: 70% definitely normal or abnormal without vs 79% with gating (p=0.05). ECG-gated SPECT tracer-combined normalcy was 92%, specificity 86% and specificity 66%. Logistic analysis showed no significant difference between the radionuclides for correctly recognizing low likelihood or cather normal, but Ti had higher sensitivity for CAD detection (p=0.0004).

Conclusion: This large blinded interpretive study of SPECT scanning in women demonstrated that contemporary SPECT provides high quality images independent of tracer and that ECG-gating improves interpretive certainty for both Ti and MIBI. Normalcy and specificity of gated images are superior to non-gated images. After controlling for these variables, Ti had higher sensitivity for detection of CAD in women.

Serial Testing With Rest/Stress Tc-99m Sestamibi Myocardial Perfusion Imaging: Normal Results Provide an Extended Warranty

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Background: Patients with known or suspected CAD with normal rest/stress Myocardial Perfusion Imaging (MPI) have low cardiac event rates (1%/y), a "Warranty Period" of 2-3 years. Cardiac risk after repeat symptom-guided testing has not been evaluated.

Objective: To evaluate the impact of repeat symptom-guided MPI in patients with prior normal MPI upon subsequent risk stratification.

Methods: The database of rest/stress Tc-99m sestamibi MPI at Hartford Hospital from 1996-2001 was queried for patients with multiple studies whose first test was normal (N=694) and those with a single study (N=958). Patients were prospectively followed for cardiac death.Fatal or non-Fatal (N=958). Patients who converted to abnormal had an increased event rate (13/168) similar to those with only one abnormal test (23/34393) 3.9%/year vs. 3.3%/year p<NS.

Conclusion: Repeat testing of symptomatic patients with known or suspected CAD with prior normal MPI is an effective means of further risk stratification. The "Warranty Period" for patients extends approximately 2 years after the most recent normal symptom guided MPI.

Myocardial Sympathetic Denervation Precedes the Neurological Involvement in Patients With Familial Amyloidoidotic Polyneuropathy

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Background: Familial amyloidotic polyneuropathy (FAP) type I is a rare, inherited condition characterized by polyneuropathy and progressive autonomic nervous system and cardiovascular manifestations. Early cardiovascular involvement is a common cause of death in FAP patients, indicating the importance of early diagnosis and treatment.

Methods: Patients with FAP were followed prospectively from diagnosis to death or last evaluation, with a mean follow-up of 12 years. Cardiac sympathetic denervation was assessed using 123I-metaiodobenzylguanidine (MIBG) scintigraphy, which is an established method for evaluating sympathetic nerve activity and cardiac autonomic function. Other clinical, ECG, echocardiographic, and Holter monitoring data were collected to assess the overall state of the cardiovascular system.

Results: Significant sympathetic denervation was observed in 23 patients with FAP, with a prevalence of 51% (12/23). The patients with severe sympathetic denervation had a higher incidence of cardiovascular disease (43%) compared to those with mild denervation (10%). The severity of sympathetic denervation correlated with the severity of neurological involvement, with patients having severe denervation having more severe neurological symptoms.

Conclusion: Early detection of sympathetic denervation in patients with FAP is crucial for early intervention and management of the disease. This study highlights the importance of incorporating early sympathetic scintigraphy in the diagnostic workup of FAP patients to identify those at high risk for cardiovascular complications and subsequently for neurological involvement.