women with undiagnosed chest pain syndrome (CPS), no prior established cardiac dis-
ease and at least 2 risk factors were randomized to one of three diagnostic protocols, pri-
mainly utilizing either EST, exercise echo (ExE) or Dobutamine stress echo (DSE). After estab-
lishing a diagnosis of cardiac or non-cardiac CP, patients were followed for at least 2 years to assess symptom and clinical course. Results: The testing protocols defined 15.2% of the patients as having cardiac and 84.8% non-cardiac CP. Initially indetermi-
nate testing occurred in 25.9% of the patients, 2.1% of ExE patients, and none of the DSE patients. In a mean follow-up of 27.3 months, 12 patients (7.6%) were determined to have had cardiac chest pain based on clinical events (including 2 MIs, no deaths). 17/23 (74.0%) non-cardiac chest pain, and 32/29 (103%) remain clinically unenlightened. The positive and negative predictive values for the testing modalities based on these clinical outcomes is as follows: EST 50.0%, 97.4%; ExE: 44.4%, 100%; DSE 75.0%, 97.1%. Conclusions: 1. Chest pain is uncommonly associated with ischemic disease in women and has a favourable prognosis. 2. Echo based testing modalities are less commonly indeterminate than EST and therefore likely to provide more timely and cost effective diagnoses. 3. All testing modalities have excellent negative predictive values. Echo based testing appears to provide fewer false positives.

1019-34 Risk Stratification and Prognosis in Octogenarians: A Stress Echocardiographic Study

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Background: The prognostic value of stress echocardiography (SE) for the diagnosis and risk stratification of coronary disease in octogenarians is not well defined. Methods: Follow-up of five years (mean 2.9 ± 0.9 years) for confirmed non-fatal myocardial infarc-
tion (n = 9) and cardiac deaths (n = 20) was obtained in 166 patients, age ≥ 80 years (mean age 84 ± 3 years, 44% male) undergo- ing SE (34% treadmill, 66% dobutamine). Left ventricular (LV) regional wall motion was assessed by consensus of 2 readers and scored as normal standard 16-segment model, 5-point scale of wall motion analysis. Ischemic LV wall segment was defined as a deterioration in the thickening and excursion during stress (increase in wall-motion score ≥ 1 grade). Results: Univariate predictors of cardiac events were: age (p = 0.01), achieved heart rate (p = 0.03), ischemia on stress echo (p = 0.001), LV ejection fraction (EF) < 40% (p = 0.001) and previous history of MI (p < 0.01). In a multivariate logistic regression model, ischemia was the best predictor of cardiac events superceding LVEF (OR 5.83; p < 0.001). Presence of ischemia in octoge-
narians increased the cardiac event rate four fold when compared with those without ischemia (event rates 5.0%/year versus 1.6%/year, p < 0.001). Conclusions: Stress echocardiography yields prognostic information in the risk stratification of octogenarians. A normal, non-ischemic study confers a benign prognosis (1.6%/year event rate). Ischemia and LV dysfunction are independent markers of poor outcome.

1020-35 Screening Stress SPECT in a Community-Based Population of Asymptomatic Diabetics

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Background: Studies of referral bias have shown that tests which perform well in highly-
selected populations referred to tertiary care facilities (typically "sicker" patients) may not be as accurate in less-selected, community-based populations. In a previous study of 1420 asymptomatic diabetics without known coronary artery disease (CAD) referred for screening stress SPECT, we reported a high frequency of abnormal scans (58%) and high-risk scans (18%). Methods: To examine the potential influence of referral bias on these results, we com-
pared the clinical characteristics and SPECT findings in the Olmsted County residents ("community-based" population, n = 145) to patients who resided outside Olmsted County ("referral" population, n = 1284).

Results: There were no differences for baseline variables between the 2 populations (see table). There were also no differences between the community-based and referral populations for percentages of patients with abnormal scans (65% vs 57%, p = 0.08) or high-risk scans (22% vs 16%, p = 0.21).

Conclusions: (1) Clinical and ECG characteristics and SPECT results were similar between these 2 populations of asymptomatic diabetics, suggesting that referral bias did not account for the high prevalence of abnormal and high-risk SPECT in these patients. (2) Among a community-based population of asymptomatic diabetics, almost one-quarter (24%) have high-risk scans.

1020-36 Detection of Ischemia in Asymptomatic Diabetics: Preliminary Results of the DIAD Study

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Coronary artery disease (CAD) in patients with diabetes mellitus (DM) is often silent, and when clinically manifest often in an advanced stage. The Detection of Ischemia in Asymptomatic Diabetics (DIAD) study is prospective study to establish the prevalence of silent CAD in asymptomatic patients with type 2 DM and to define clinical risk profile of patients at increased risk for CAD. Entry criteria were males or females aged 50-75 years, type 2 DM, no known or suspected CAD. Patients were randomized to either testing with ECG-gated Adenosine-Tc-99m-Sestamibi SPECT (AdMibiSPECT) and 5 yrs fol-
low-up, or to follow-up alone without imaging. Between Sept. 2000 and Sept. 2002 1,124 patients were enrolled in 14 clinical sites. There were 802 males (54%), 522 females (46%). 78% of patients were Caucasian, 22% were non-Caucasian. Mean age was 61.7 years; mean duration of DM was 9.28 years. All patients had complete physical exam with assessment of neuropathy and cardiac autonomic dysfunction and blood biochemistry. All SPECT data were analyzed in the Yale Radiouclide Core Laboratory. At time of abstract submission AdMibiSPECT was available in 502 patients (95% of acquired image data). Results of preliminary analysis are shown in table. Thus, in this prospective study in asymptomatic patients with DM, abnormal AdMibiSPECT was observed in 27%. The results of the DIAD study will be important for drafting evidence-based guidelines for the screening of asymptomatic patients with DM.

Elevated Serum Creatinine is Independently Associated With Abnormal Stress Myocardial Perfusion Imaging in Males Presenting to the Emergency Department With Chest Pain

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Background: Conventional coronary artery disease (CAD) risk indicators do not fully predict CAD. Our objective was to assess the value of serum creatinine (Cr) as a marker of CAD as defined by abnormal stress myocardial perfusion imaging (MPI) in patients presenting to the emergency department (ED) with chest pain, non-diagnostic electrocardiograms (ECG) and normal troponin levels. Methods: We studied 176 males and 237 females (mean age 58 ± 13 years) presenting to the ED with chest pain. Patients were stratified based on Cr ≥ 1.1 mg/dL for males and > 0.9 mg/dL for females. All underwent stress MPI. Patients with a prior history of CAD and Cr > 3 mg/dL were excluded. Results: The 53 males with Cr ≥ 1.1 mg/dL, 52% had abnormal stress MPI. Only 25% of the 103 males with Cr < 1.1 mg/dL had an abnormal MPI (p = 0.001). Sensitivity, speci-
ficity, positive predictive value, and negative predictive value were 63, 72, 62, and 75% respectively. Cr was not predictive of abnormal MPI in females. In a multivariate model adjusted for cardiovascular risk factors, Cr was highly independently associated with abnormal stress MPI (Table). Conclusion: The independent association of elevated Cr in males with abnormal stress MPI suggests that Cr adds additional value to conventional risk indicators in predicting CAD.