Results: Kissing stent insertion was successfully performed in all 20 patients without acute complications. Mean percent stenosis decreased from 46.2 ± 24.8% to −6.8% ± 13.3% (p = 0.0001) in the right iliac artery, 42.3 ± 22.8% to −1.6 ± 18.1% (p = 0.0001) in the left iliac artery, and 19.1 ± 16.6% to 2.3 ± 16.4% (p = 0.0008) in the distal aorta. There were no deaths, MI's or emergent surgery. Intermittent claudication symptoms were improved in 18 of 19 patients (95%) with 12 of 19 patients (63%) becoming totally asymptomatic. The strongest predictor of clinical outcome following kissing stent insertion was the pre-procedural extent of femoropopliteal disease: 89% of patients with femoropopliteal narrowing <75% bilaterally became completely asymptomatic at follow-up compared with only 30% of patients with more severe stenoses (p = 0.02).

Conclusion: Stenoses of the aortic bifurcation can be treated effectively with kissing stents without any immediate adverse outcomes.

862 Prognostic Factors and Outcomes in Heart Failure

Tuesday, March 31, 1998, 4:00 p.m.–5:30 p.m.
Georgia World Congress Center, Room 360W

4:00

862-1 Predictors of 1 Year Mortality in 2086 Outpatients With Congestive Heart Failure: Data From Italian Network on Congestive Heart Failure

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Background: Pharmacological treatments of patients with congestive heart failure (CHF) are greatly changed in the last 5 years, due to the favourable results showed by several, well conducted controlled clinical studies. However, few data are available on the outcome of patients treated at the best of the recommended treatments. Further, special attention should be given to the clinical predictors of death to improve patients survival.

Methods: We prospectively followed 2086 patients, enrolled in the CHF Italian Network project. Information on 1 year follow-up were collected by locally trained clinicians using an ad-hoc software. Univariate and multivariate analyses were performed to evaluate the association between clinical variables and 1 year mortality.

Results: One year mortality was 22.9% (479/2086) despite the high rate of use of recommended treatments: ACE-inhibitors 81%, digitalis 70%, diuretics 87%. Betablockers were used in only 9% of pts. Multivariate analysis, adjusted for the main clinical-epidemiological variables showed that the following variables were significantly associated with a higher 1 year mortality: age (≥70 vs <70 years) (OR 1.73 95% CI 1.35–2.22), NYHA class (III–IV vs I–II) (OR 1.87 95% CI 1.48–2.36), at least 1 vs no hospital admission in the year preceding the entry visit (OR 1.66 95% CI 1.30–2.11), atrial flutter/fibrillation vs sinus rhythm (OR 1.33 95% CI 1.01–1.75), presence vs absence of third heart sound (OR 1.47 95% CI 1.15–1.87), creatinine level (>2.5 vs ≤2.5) (OR 4.33 95% CI 1.79–10.44), pts not treated with ACE-inhibitors vs pts on ACE treatment (OR 1.41 95% CI 1.07–1.87).

Conclusions: Our study shows that 1 year mortality of outpatients with CHF, followed by cardiologists, is still high despite the high compliance to treatments guidelines. Simple clinical-epidemiological variables can identify high risk pts to whom specific interventions to improve survival should be targeted.

4:15

862-2 Clinical Characteristics and Long-term Outcomes of Patients With Diastolic Heart Failure

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Background: Although the syndrome of diastolic heart failure (DHF) may occur in up to 40% of all heart failure patients (pts), the clinical, angiographic characteristics, and long-term outcomes of these pts is poorly understood.

Methods: We prospectively evaluated 3,498 consecutive pts with New York Heart Association class II–IV symptoms and ejection fractions (EF) >0.40, who underwent cardiac catheterization between 1/84–12/96 at Duke University Medical Center.

Results: The median age for the entire cohort was 64 years, 25% of the population was over the age of 70. In addition, 55% of the pts were of female gender, 60% had ischemic heart disease, 26% had a history of diabetes, 59% had a history of hypertension, and 11% had moderate valvular heart disease (VHD). The median EF was 58%. One third of the pts had multivessel disease by coronary angiography.

The 5 year mortality was 0.34 in the ischemic cohort, and 0.26 in the nonischemic cohort. The independent predictors of mortality ($p < 0.05$) using a multivariable Cox proportional hazard model were age, Class IV symptoms, absence of angina, VHD, extent of coronary disease, peripheral vascular disease, lower EF, diabetes mellitus, and minority race.

Conclusion: DHF is characterized by unique clinical and angiographic characteristics associated with a 5 year mortality rate of 0.31. Furthermore, several clinical and angiographic characteristics are predictive of long-term survival.

4:30

862-3 Prognosis of Heart Failure – A Population-based Study of the Outcome in Incident Cases

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Background: There is no information on the outcome of incident cases of heart failure arising from the general population. There is an assumption that the placebo arm of clinical trials which involve patients with heart failure of different severity provides accurate information on prognosis.

Methods: The present study enrolled 220 incident cases of heart failure of any age from a population of 150,000 people in west London over a 20 month period. Cases were identified from acute admissions to the hospital serving this population (82%) and from a rapid-access clinic (18%) to which any suspected case of heart failure could be referred. The clinical assessment, ECG, chest x-ray and echocardiogram of all cases were subsequently reviewed by a panel of three cardiologists working to a pre-set definition of heart failure according to the guidelines of the European Society of Cardiology.

Results: The series included 118 men and 102 women with a median age of 76 years. With an average follow-up of 16 months, there were 90 deaths, 83 due to cardiovascular disease and 7 from neoplastic disease. Survival was 81% at one month, 71% at 6 months and 64% at one year. Cox univariate analysis showed many factors including NYHA class, cardiothoracic ratio, and degree of pulmonary congestion on chest x-ray to be associated with survival. Patients with atrial fibrillation (paroxysmal or established) had a better prognosis than those in sinus rhythm. Multivariate analysis showed that age, systolic blood pressure, rales, and serum creatinine levels (reflecting the hemodynamic severity of the presentation) were significantly associated with survival. Etiology of heart failure was not associated with prognosis.

Conclusions: There are striking differences between the true population of heart failure patients and those enrolled in clinical trials. The survival of incident cases is poor, particularly during the first month after presentation.

4:45

862-4 Incidence, Predictive Factors and Prognostic Significance of Supraventricular Tachyarrhythmias in Congestive Heart Failure

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Background: The incidence, the predictive factors and the morbidity and mortality associated with the development of supraventricular tachyarrhythmias (SVT) in patients with congestive heart failure (CHF) are poorly understood. We examined these questions in the data from the Digitalis Investigation Group (DIG) trial.

Methods: In the DIG trial, patients with CHF who were in sinus rhythm were randomly assigned to digoxin (n = 3889) or placebo (n = 3899) and followed for a mean of 37 months. Baseline factors that predicted the occurrence of SVT were determined by logistic regression analysis. Cox proportional hazard model was used to determine the effect of SVT on total mortality and stroke.

Results: Eight hundred sixty-six patients (11.1%) developed SVT during the study period. Older age [odds ratio (OR) 1.029, p = 0.0001], male gender (OR 1.258, p = 0.01) increasing duration of CHF (OR 1.003, p = 0.002) and a cardio-thoracic ratio of >0.50 (OR 1.416, p = 0.0001) predicted an increased risk of developing SVT. Left ventricular ejection fraction, New York Heart Association Functional Class and treatment with digoxin versus placebo were not related to the occurrence of SVT. After adjustment for these other risk factors, development of SVT predicted a greater risk of total mortality (Risk Ratio (RR) = 2.453, p = 0.0001), and stroke (RR = 2.379, p = 0.0001).

Conclusion: In a population with CHF, older age, male gender, longer duration of CHF and increased cardio-thoracic ratio predict an increased risk for developing SVT which, in turn, is a strong independent risk factor for stroke and mortality in this population.