The effects of Carvedilol on myocardial morphology and functional outcome were studied in patients with chronic HM undergoing cardio-vascular bypass grafting (CABG). Nineteen patients (13 males, 62+/-9 years) eligible for CABG due to severe CAD were randomized into two groups: patients in group 1 (n=10) received Carvedilol (25 mg/day), patients in group 2 received placebo (n=9), starting from randomization 7-8 weeks prior to CABG until follow-up 4-6 months postoperatively, in addition to standard antianginous therapy and aspirin. Left ventricular ejection fraction (EF) and regional wall motion abnormalities (WMA, centerline method) were quantitated in cineventriculography at baseline and follow-up. Viability was assessed by Tc99m scintigraphy and F-18-FDG positron emission tomography. Intraoperatively, transmural needle biopsies were obtained for microscopic analysis and immunohistochemistry from hypokinetic but viable myocardial regions. EF in group 1 increased from 31±5% to 44±4% postoperatively (p<0.005), EF in group 2 increased from 30±6% to 40±6% (p<0.05 versus preoperatively and versus group 1). WMA in the center of myocardial dysfunction in group 1 increased from -2.1±0.4 to -0.6±0.5 (p<0.05), WMA in group 2 increased from -2.3±0.5 to -1.6±0.6 (p<0.05 versus pre and versus group 1). Microscopic analysis showed mild degenerative changes in group1 with mild fibrosis (28±7%) and no evidence for apoptosis. Biopsies in group 2 showed more apoptotic cell changes and progressive cardiomyocyte degeneration but similar mild-to modest fibrosis (33±6%). Early treatment with Carvedilol in patients with hibernating myocardium might delay progressive cardiomyocyte degeneration possibly due to anti-apoptotic and anti-oxidant effects, which might result in improved recovery of contractile function after revascularization.

1137-94 Age and the Lack of an Adverse Effect of Diabetes Explain the "Obesity Paradox" in Patients With Myocardial Infarction

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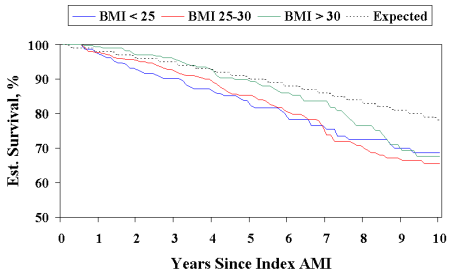
Background: The "obesity paradox" refers to improved survival among obese patients following acute myocardial infarction (AMI). The nature of this remains poorly defined.
Methods: We analyzed the outcome of 941 patients with AMI from 1988 until 2001. Obesity was defined as BMI ≥ 30, overweight as 25<BMI < 30 and normal weight as BMI < 25. Univariate and multivariate predictors of survival were analyzed.
Results: Obese patients were younger and less likely to be female at time of admission (p<0.01). The prevalence of diabetes was higher in obese patients (24%) compared to overweight (15%) or normal weight patients (13%), p <0.05. There were no differences in other clinical characteristics. Long-term mortality was significantly lower in the obese (RR 0.64) and overweight (RR 0.76) patients compared to normal weight patients (RR 1.0), p=0.04. Long-term survival among all three groups was less than age-predicted (see figure). Diabetes was not a univariate predictor of mortality risk in obese patients (RR NS) but was in non-obese patients (RR 1.77, 95% CI 1.26, 2.48), p < 0.01. After adjustment for age and diabetes, there were no longer significant differences: Obese (RR 0.74), overweight (RR 0.83) vs normal (RR 1.0), p=0.14. Conclusion: The obesity paradox following AMI appears to be largely a function of younger age at time of presentation and the lack of impact of concomitant diabetes. When adjusted for age, the long-term RR of death in obese and overweight patients is similar to normal weight individuals



1137-95 Demographics, Treatment, and Outcome of Acute Coronary Syndromes: 17 Years of Experience in a Tertiary Care Center

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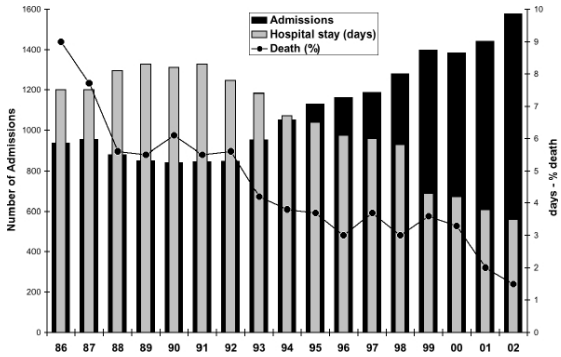
Background: There is limited epidemiological information about the evolution of demographics, treatment, and outcome of patients admitted to tertiary coronary care units (CCU) over the past 15 years.
Methods: We prospectively studied 18,719 patients admitted from April 1986 to March 2003 in a 22 bed CCU. The attending physicians filled in the discharge form, which was then entered in a computer database designed for the study.
Results: From 1986 till 2003, the number of admissions increased from 937 to 1577/year while hospital stay decreased from 7.5 to 3.5 days; mean age increased from 58.4 to 63.4 years and the proportion of males remained stable at about 70%. Use of coronary angiograms increased from 49.8% to 81.1% of all patients while fibrinolysis dropped from 12.2% to 0%. In-hospital mortality dropped from 9% to 1.5%. The percentage of Swan-Ganz decreased from 8.1% to 0.7% while intra-aortic balloon pump insertion remained stable. From 1995 till 2003, the proportion of stenting during PTCA increased dramatically from 0 to 86%. In the past 5 years, surgical revascularization remained stable around 20% of all admissions.
Conclusions: There has been a tremendous increase in efficiency with approximate doubling of the admissions turnover rate in a tertiary care CCU. Patients with acute coronary syndromes are stratified faster and treated more invasively. Therapeutic advances are reflected by an almost linear 0.5%/year decrease of in-hospital mortality.



1137-96 Clustering of Novel Risk Factors Correlates With the Metabolic Syndrome

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Background: Homocysteine, fibrinogen, lipoprotein (a) (Lp(a)), and C-reactive protein (CRP) have been shown to be independently associated with cardiovascular disease.However, little is known regarding the clustering of these novel risk markers and their correlation to the metabolic syndrome.
Methods: Data were collected from primary and secondary prevention patients entering a cardiology clinic (n=1306, mean age 55 +/- 9 years, 36% female (n = 469), 19% diabetics (n=243), mean waist circumference 98cm, 8% current tobacco users (n=110), mean systolic blood pressure 122 mmHg, median LDL 126 mg/dL, median HDL 43 mg/dL), including novel risk markers. We sought to determine whether the novel risk markers were clustered in distribution and/or correlated to the variables of metabolic syndrome, as defined by ATP III guidelines.
Results: These four novel biomarkers were clustered more than would be expected under the assumption of independence (p<0.001). The expression of metabolic syndrome increased from 11% when none of the four were elevated to 28% when 3 or 4 were elevated (p<0.001). **Conclusions:** Homocysteine, fibrinogen, Lp(a) and CRP cluster in an elevated state and are not independent of one another. The number of elevated novel biomarkers directly correlates to the presence of the metabolic syndrome

1137-97 Soluble CD40 Ligand in Predicting Coronary Artery Disease and Long-Term Outcomes in Stable Patients With Angiographically Defined Disease States

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Background:
Elevated levels of soluble CD40 ligand (sCD40L) have been reported in patients with acute coronary syndrome and have been found to independently predict risk of future events in this population. However, to date, no study has correlated sCD40L levels and the long-term risks associated with coronary artery disease (CAD) in non-MI patients.
Methods:
Serum sCD40L levels using ELISA (R&D; Systems) were measured in 909 patients evaluated by angiography for the presence of CAD. Patients presenting with acute MI were excluded. A three-way matching scheme (by age [±5 years], gender, and time period of catheterization [±1 year]) was used to identify 303 patients with CAD (≥70% stenosis in ≥1 major vessel) who experienced a cardiac event (death, MI) within one year, 303 patients with CAD but with no events at one year, and 303 with no CAD.
Results:
The three groups were balanced, with patient age averaging 64 ± 11 years; 74% males. Median (SE) sCD40L levels were different for no-CAD patients (335 [60] pg/mL) compared to CAD (248 [65] pg/mL, p=0.01) and to CAD/event (233 [63] pg/mL, p<0.001) but not between CAD and CAD/event patients (p=0.24). After separating sCD40L levels into quartiles, performing logistic regression, adjusting for standard risk factors and C-reactive protein, and performing Bonferroni adjustment for multiple comparisons (p-critical = 0.017), there was a non-significant trend toward *decreased* risk of CAD vs no-CAD (Q4 vs. Q1: odds ratio [OR]= 0.71, 95% confidence interval [CI]=0.44-1.13, p=0.15) and CAD/event vs no-CAD (Q4 vs. Q1: OR=0.59, CI=0.37-0.96, p=0.03), but not for CAD/event vs. CAD (Q4 vs. Q1: OR=0.89, CI=0.56-1.41, p=0.61). Analyses showed no differences between men and women.
Conclusions:
In contrast to previously reported information in patients with acute coronary syndrome,