Characteristics of Poor Compliance to Preventive Medications in Pts with Ischemic Vascular Events

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Background: Low compliance to preventive medications (meds) is associated with increased morbidity, mortality and higher costs for the health care system. We characterized the pts with low compliance or interruption of preventive meds hospitalized with acute cardiac or cerebrovascular event.
Methods: All patients admitted to Neurology and Cardiology departments during March-December 2010 were included. Pts must have taken at least one preventive med during the month before hospitalization. Pts were asked to answer a questionnaire during hospitalization. Statistical analysis: T-test, X^2 and logistic regression were used to test the differences between compliance/interruption and the demographic characteristics, clinical characteristics and barriers to compliance.
Results: 253 pts, mean age 64, 68.8% men. Pts with partial compliance constituted 34.1%, were younger (60.4 vs. 65.3, p=0.007), took less meds (p=0.002, OR=1.19), had higher likelihood of heart disease (p=0.094, OR=1.67) than patients with full compliance. Barriers in this group were forgetfulness (39.1% vs. 20.9%, p=0.003) and lack of defined method for remembering meds intake (55.1% vs. 39.7%, p=0.028). The highest rates of partial compliance were in lipid lowering drugs and anti-platelets (27.7%, 22.6%, respectively). Pts who interrupted drug intake constituted 15% and were also younger (59.7 vs. 64.9, p=0.008) but had higher likelihood of smoking (p=0.040, OR=2.24). Barriers in this group were inconvenient dosage times (31.8% vs. 16.4%, p=0.018), lack of defined method for remembering medication's intake (56.8% vs. 41.8%, p=0.069) and difficulty getting refill on time (40.9% vs. 23.7%, p=0.019). The most frequently interrupted meds were lipid lowering drugs (10.6%).
Conclusions: Poor compliance to meds is more frequent in younger coronary pts taking fewer meds. Our findings should be considered when planning interventions to improve compliance to preventive treatment of vascular ischemic events.

Cardiac Structure and Function and Mortality in the Oldest Old

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Background: People over the age of 85 are the world's most rapidly growing age group and have a high incidence of cardiovascular mortality. The prognostic significance of abnormalities in cardiac structure and function in this age group is unclear. The objective of this study was to prospectively determine the prognosis of abnormal cardiac structure and function in an age-homogenous, community-dwelling population of subjects born in 1920-1921.

Methods: Subjects were recruited from the Jerusalem Longitudinal Cohort Study. Echocardiography was performed with a portable echocardiograph at the subjects place of residence. Standard echocardiographic assessment of cardiac structure and function was performed. 5-year mortality was assessed via a centralized government database.

Results: 502 subjects (235 males, 267 females) were enrolled in the study of whom 107 (21%) died at the time of 5-year follow-up. Subjects who died had significantly higher left atrial volume index (LAVI) (42.3 ± 16.5 mL vs. 36.6 ± 12.5 mL; $p < 0.01$), and left ventricular mass index (LVMI) (133.1 ± 47.6 vs. 119.8 ± 30.6 g/m2; $p < 0.05$). Ejection fraction was significantly lower in subjects who died (52.5 ± 11.5% vs. 56.4 ± 9.4%; $p < 0.003$) however, indices of diastolic function were not significantly different between the two groups (E:e' 13.0 ± 5.3 vs. 12.2 ± 4.9; $p = 0.18$). these findings remained significant after correction for possible confounders.

Conclusions: Elevated LAVI and LVMI and decreased systolic function predict 5-year mortality in a community-dwelling population of the oldest old Diastolic dysfunction did not predict 5-year mortality in this cohort

'SHL'-Telemedicine 1987-2012: 25 Years of a Unique Service in Israel

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Background: 'SHL'-Telemedicine (formerly 'Shahal') provides professional medical care to subscribers who contact its monitor center by telephone or transmit their real time ECGs telephonically and describe their symptoms to a specially trained nurse, whereupon appropriate measures are taken, including the dispatching of mobile intensive care units (MICUs).
Objectives: To summarize 'SHL'-Telemedicine's 25 years of community service.
Methods: Retrospective data analysis.
Results: Since 1987, 336 physicians, 227 nurses and 419 paramedics have handled 3,817,122 calls from 183,427 (cumulative) subscribers who transmitted 1,542,342 ECGs. The subscribers' age distribution was: > 81 years = 40%, 61-80 = 38%, 41-60 = 18% and <39 = 4%. Over one-fifth (22%) were completely healthy, 26% had at least one major coronary risk factor, and 52% had a cardiac history of >1 of the following: coronary revascularization (26%) myocardial infarction (24%), angina pectoris (24%), supraventricular (11%) or ventricular (7%) arrhythmias, 11% valvular disease and 10% various degrees of congestive heart failure (CHF). Telephonic medical assistance sufficed for 83% of the callers, and an MICU was dispatched for 17%, of whom 39% were taken to hospital and most of them were hospitalized for >24 hours. 'SHL'-Telemedicine performed 2,554 out of hospital resuscitations of which 347 (13.6%) patients survived to hospital discharge. In addition, since the initiation of the blood pressure program ('Telepress') in March, 1995, the monitor center received 1,587,984 automatically transmitted blood pressure readings of patients' self-measurements. 'SHL'-Telemedicine's CHF program led to a >60% reduction of hospitalizations among its subscribers. They also sought round-the-clock medical advice very early after symptom onset, unlike the behavior patterns of the general population.
Conclusions: 'SHL'-Telemedicine has become a trusted source of emergency and long-term medical service for the community-at-large.

Hemoglobin A1c Levels in Patients with Acute Coronary Syndrome (ACS) Undergoing PCI

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Background: Diabetes mellitus (DM) is an established risk marker in patients with ACS. The true prevalence of diabetes in such patients may be underestimated on admission because the diagnosis of DM may often be substantially delayed in the outpatient setting and the interpretation of glucose levels in patients with acute myocardial infarction is difficult. In 2008, the International Expert Committee recommended that the diagnosis of diabetes can be made if the hemoglobin A1c (HbA1c) level is ≥6.5%. The reported prevalence of DM in ACS patients undergoing percutaneous coronary intervention is 30%-40%. We hypothesized that use of HbA1C might reveal a higher prevalence of DM in such patients. Our aim was therefore to determine the prevalence of elevated HbA1c in the patient with ACS undergoing coronary intervention. Methods: Consecutive patients with ACS undergoing PCI in a large tertiary center were included in the study. HbA1C levels were obtained prior to intervention.
Results: 219 patients were enrolled into the study. Age was 64± 11.8 years (mean± SD). The majority were males (78.1%). Known diabetes was present in 105 (47.9%) patients. Mean HbA1C was 7.13±1.56% (figure1). In patients with known DM mean HbA1C was 8.24±1.5% as compared 6.06±0.52% in patients without known DM. In the latter group 17 (14.7%) had HbA1C levels ≥ 6.5%; this group with unknown DM constituted 7.8% of the total population. Therefore adoption of HbA1C as a diagnostic test for DM resulted in overall rate of DM of 56.4% in our cohort.
Conclusions: The true prevalence of DM in a contemporary cohort of ACS patients undergoing coronary intervention is higher than previously reported. Adoption of the HbA1C as a diagnostic test for DM results in small but potentially important increase in the DM prevalence in this group. Long term follow-up is required to assess the association of HbA1C levels on cardiac outcomes and the potential effect of hypoglycemic treatment in this population. <IMAGE02>