who did not experience any change in their serum creatinine levels (38% vs. 22% vs. 7% p<0.05, respectively). Both R-CRS and CRS were associated with an increased in-hospital mortality in contrast to creatinine stable patients (6.3% vs. 2.9% p<0.05 and 13.4% vs. 2.9% p<0.05, respectively).

Conclusions: R-CRS is associated with significantly worsened prognosis and survival. These findings may suggest pre-admission worsened renal failure in patients with advanced congestive heart failure. Therefore, resolution of venous congestion may be the mechanism for these improvements in renal function with treatment.

P2734 | BEDSIDE
The nutritional marker pre-albumin is strongly associated with adverse outcome in heart failure

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Background: Pre-albumin is the best indicator of nutritional status. We have previously shown that pre-albumin is an independent predictor of in-hospital mortality in heart failure (HF). Still, its medium-term prognostic value in HF is yet unknown. We aimed to evaluate if a low discharge pre-albumin would predict mortality and mortality in HF.

Methods: We conducted a prospective observational study. All patients discharged after admission with a primary diagnosis of HF were eligible for study entry. We excluded those with: acute coronary syndromes, no echocardiographic structural or functional abnormalities, and no discharge pre-albumin available. Fasting venous blood samples were collected to all patients on the discharge day. Patients were followed up for 6 months. Endpoints were: all-cause and HF-death; all-cause readmission and readmission due to HF. Patients with pre-albumin ≤15.0 mg/dl (1st quartile) and those with pre-albumin >15mg/dl were compared. A time-dependent Cox-regression analysis was used to evaluate the prognostic impact of low pre-albumin.

Results: A total of 514 patients were analysed. Mean age was 78 years and 45.7% were male. HF was ischaemic in 41.4% and 43.8% of the patients had HF with preserved ejection fraction. During the 6-month follow up 101 patients died, 78 due to HF; 209 patients were hospital readmitted and 140 due to worsening HF. Median (interquartile range) pre-albumin was 20.1 (15.3-25.3)mg/dL. Patients with lower pre-albumin were more often women, older aged and with non-ischaemic HF; they also had lower albumin, haemoglobin and total cholesterol and higher C-reactive protein (CRP) and B-type natriuretic peptide (BNP). Lower pre-albumin was also associated with lower creatinine and less beta-blocker (BB) use. Patients with discharge pre-albumin ≤15mg/dl had a HR of 6 months all-cause death of 2.49 (95% CI: 1.67-3.70) and of death of 2.66 (95% CI: 1.70-4.17); the HR for all cause hospitalization was 1.87 (95% CI: 1.39-2.50) and for HF readmission and readmission due to HF was 1.78 (1.18-4.13) and for all-cause rehospitalization and HF readmission we were 1.68 (1.15-2.47) and 1.94 (1.23-3.08).

Conclusions: Patients with discharge pre-albumin ≤15mg/dl have a significantly higher risk of 6 months morbidity and mortality. Malnutrition predicts ominous outcome after HF hospitalization.

ATRIAL FIBRILLATION, HEART FAILURE AND COMPLICATIONS

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Long-term use of vitamin K antagonists in patients with atrial fibrillation and cancer incidence: a pharmaco-epidemiological study

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Purpose: The relation between cancer and thromboembolism has been long recognized. A possible protective effect of long-term oral anticoagulation has been suggested. Using data from the ARNO database, we conducted a population-based epidemiological study to ascertain whether patients receiving long-term oral anticoagulation (K antagonists (VKAs) for atrial fibrillation (AF)) have a lower incidence of cancer.

Methods: The ARNO database is a population-oriented database for reimbursed drug prescriptions in Italy. The system merges information of the health area population, prescriptions (using ATC codes), and hospital admissions (using ICD-9 codes) into a single database. We analysed data of all individuals aged 18 years and above, discharged from the hospital with a primary or secondary diagnosis of nonvalvular AF, in 11 Italian regions. Two groups were identified according to the long-term use of VKAs. The incidence of any type of cancer (according ICD-9 codes) was recorded in each group. The whole cohort was followed up for 2 years and the differences in cancer incidence between the groups are reported herein.

Results: Of the 2,862,264 subjects considered for this study 13,360 patients were discharged from the hospital with a diagnosis of nonvalvular AF. The follow-up was available for 1088 patients (mean age 76±11 years, 50.4% female). The survival was 29.9 years. 48% (mean age 74.9 years) were treated with VKAs; the rest (mean age 78±12, 52.9% female) did not receive anticoagulation. Amongst the anticoagulated patients, 9.6% had cancer diagnosed during follow-up as opposed to 11.7% on the non-anticoagulated group (p<0.0005). On logistic regression analysis (Table), age, gender and long-term treatment with VKAs were independent predictors of cancer incidence. The use of VKAs reduced cancer incidence by 19% (OR 0.81, 95% CI 0.70-0.93, p=0.01).

Conclusions: These results support the hypothesis that long-term VKA use might have a protective effect on cancer incidence.

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Atrial fibrillation in patients undergoing liver transplantation: survival and cardiovascular complications


Purpose: Atrial fibrillation is the most common cardiac arrhythmia and a harbinger of major complications. It adversely affects cardiovascular morbidity and mortality and escalates risk for stroke. Organ transplants are scarce and efficient allocation for suitable recipients is paramount. The impact of preexisting atrial fibrillation in patients undergoing liver transplantation has not yet been characterized.

Methods: Patients who underwent liver transplantation between Jan 2005 and Dec 2008 were identified, and all patients with preexisting atrial fibrillation were matched to controls by strata and 1:2 propensity score matching. The recipients were categorized by quartiles (≤1.68, ≤3.94, >3.94, >7.82) of recipient age, raw Model for End Stage Liver Disease score, Donor Risk Index and pre-transplant diabetes status. Survival analysis was performed using Kaplan-Meier curves and the log rank test.

Results: 717 patients underwent liver transplantation during the study period. Of these, 32 patients had pre-existing paroxysmal, recurrent or chronic atrial fibrillation, and were matched with 64 controls from the same cohort. Mean graft survival was 1243 days (SD, 881) in the group with atrial fibrillation and 1444 days (SD, 889) in the matched controls (p=0.136). Mean patient survival was 1400 days (SD, 849) versus 1446 days (SD, 866) in the atrial fibrillation and control groups respectively (p=0.644). Compared to controls, persons with atrial fibrillation were more likely to have a cardiac cause of death (p=0.041; OR, 3.287), perioperative cardiac events (p=0.02; OR, 7.826), history of stroke (p=0.036; OR, 3.595), left ventricular hypertrophy (p=0.023; OR, 3.33), and renal dysfunction (p=0.028; OR, 1.732) and history of congestive heart failure (p=0.043; OR, 8.857). These applied regardless of whether the atrial fibrillation was paroxysmal, recurrent or chronic-persistent.

Conclusion: Liver transplant patients with pre-existing atrial fibrillation are likely to develop perioperative cardiac events and have a higher cardiovascular morbidity and mortality than their matched controls, regardless of the type of atrial fibrillation. These results have potential implications for the management of this patient population.

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Resting heart rate and decline in cognitive function: observations from the ONTARGET/TRANSEND studies

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Background: Higher resting heart rate (RHR), even within the normal range, has been associated with adverse cardiovascular outcomes. Recently, RHR was shown predictive of cognitive decline among patients with ischaemic stroke. It is not known whether RHR is linked with cognitive decline in a broader population.

Purpose: We hypothesised that RHR is independently associated with decline in cognitive function in patients with elevated cardiovascular risk.

Methods: We conducted a post hoc analysis of patients enrolled in parallel multicentre trials that randomised participants with vascular disease or diabetes mellitus to telmisartan, ramipril, or their combination; and to telmisartan or placebo as an add-on to telmisartan or ramipril. These results support the hypothesis that long-term VKA use might have a protective effect on cancer incidence.