

consultant cardiologist. Mean follow-up was 10±6.7 months. We compared hospitalisations for an equal period pre and post-AHFU treatment. Statistics were analysed using One Way ANOVA or Student's T test.

Results: 53% (179/335) patients had HF with reduced EF (HFREF), 35% (117/335) had HF with preserved EF (HFPEF) and 12% (39/335) had HF with mildly reduced EF (HFmrEF). HFPEF patients were older (median age 80; range 40-97; p=0.02) than HFmrEF (76 years; range 28-93) or HFREF patients (76.5 years; range 18-96). There were more males in the HFREF group (76% vs. 53% in HFPEF and 59% in HFmrEF groups). HFREF patients had higher BNP levels (median 4555 ng/L range 267-35000; p<0.001) versus 2057 ng/L (range 215-35000) in HFPEF and 1807 ng/L (range 236-11741) in HFmrEF. HFPEF patients required a higher dose of IV furosemide (median dose 200 mg, range 60-440mg; p=0.02) and a higher number of visits (mean 5.3±2.5; p<0.001) compared to HFREF patients (median dose 180mg; range 40-400 and mean no. of visits 4±2) and HFmrEF groups (median dose 200mg, range 80-480 and mean no. of visits 4.3±2.1). HF hospitalisations reduced significantly in all 3 groups - HFREF group (mean 0.97±0.42 pre-AHFU service to 0.45±0.1 post-AHFU treatment; p<0.001); HFPEF group (0.88±0.4 pre-AHFU to 0.4±0.1 post-AHFU; p<0.001) and HFmrEF group (0.84±0.35 pre-AHFU to 0.37±0.15 post-AHFU; p<0.001). The highest mortality during follow-up was in the HFREF group (33%; p=0.03) when compared to HFmrEF (12%) and HFPEF (24%).

Conclusion: Ambulatory ADHF management using a multi-disciplinary approach, leads to a significant reduction in hospitalisations and is a safe as well as efficacious strategy.

Disclosure of Interest: None declared

PO055

Do Betablockers and Statins Prevent the Epirubicin Induced Cardiotoxicity In Cancer Patients ?

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Introduction: The alteration of the cardiac performance in cancer patients treated with anthracycline-containing chemotherapy regimens is becoming a major clinical problem, as the risk of developing heart failure, even years after treatment, is important. The introduction of cardioprotective strategies is of major importance nowadays.

Objectives: The aim of our present study was to assess whether treatment with beta-blockers and statins can prevent the left ventricular diastolic performance dysfunction in cancer patients treated with different chemotherapy regimens containing epirubicin, using Doppler echocardiography.

Methods: In this prospective study, 34 patients with different malignant tumors treated with epirubicin in different chemotherapy protocols together with betablocker (bisoprolol 10 mg) and statin (atorvastatin 40 mg) (study arm), and a gender- and age-matched group of 34 patients with different malignant tumors treated with epirubicin alone in different chemotherapy protocols (control arm), were assessed by echocardiography. The left ventricular diastolic function was assessed by Doppler ultrasound by evaluating the transmitral flow: we measured the maximal velocity of the E wave (rapid filling) and A wave (atrial filling), the ratio of Emax/Amx, the pressure half time (PHT), the deceleration time of the E wave (DT) and the isovolumic relaxation time (IVRT). We measured the left ventricular ejection fraction in order to assess the left ventricular systolic function.

Results: We documented a deteriorated left ventricular diastolic function in both groups, expressed by a decrease of Emax and an increase of A wave, so that E/A ratio became subunitary. We also documented a more prolonged IVRT in the both groups and also a prolongation of the PHT and of the E wave in the two groups. The E wave deceleration time was significantly prolonged in both groups. The left ventricular systolic function was less altered in the study group compared to the control arm.

Conclusion: In the present echo - Doppler study we documented an impaired left ventricular diastolic performance in patients with various malignancies treated with epirubicin, impairment due to poor left ventricular compliance. The associated treatment with beta-blocker and statin failed to prevent deterioration of the left ventricular diastolic performance, but prevented the alteration of the systolic performance.

Disclosure of Interest: None declared

PO057

«Early» Echocardiographic Response To Cardiac Resynchronization Therapy and Long-term Mortality In Patients With Congestive Heart Failure

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Introduction: The effect of cardiac resynchronization therapy (CRT) can be «early» and «late» but the relationship between time of the best effect and long-term mortality still remains unclear.

Objectives: To evaluate clinical, morphological, functional features and mortality in patients with congestive heart failure (CHF) and different time of the best response to CRT.

Methods: 122 patients (82.8% men, mean age 54.8±9.6 years) with NYHA functional class III-IV and left ventricular ejection fraction (LVEF) <35% were enrolled. At baseline, 1, 3 months and each 6 months after implantation we evaluated clinical and echocardiographic parameters. In 28 patients the best decrease of left ventricular end-systolic volume (LVESV)

was achieved up to 3 months (1.1±0.9 months, I group - «early» response) and in 94 patients - after 3 months (22.6±14.9 months, II group - «late» response). Groups did not differ in clinical characteristics, QRS duration and parameters of mechanical dyssynchrony.

Results: In II group responders (decrease in LVESV ≥15%) were identified more frequently (90.4% vs 60.7%; p=0.001), all patients with decrease of LVESV ≥30% (super-responders, n=53) had «late» response.

During follow-up period (33.2±16.7 months) increase in LVEF and decrease in LVESV were more evident in patients with «late» response.

In Kaplan-Meier analysis mortality in II group was significantly lower (28.6% vs 3.2%; p=0.001). Cox regression showed that LVESV (HR 1.012; 95% CI 1.004-1.021; p=0.005) and the time of the best response (HR 0.131; 95% CI 0.032-0.530; p=0.004) were associated with long-term mortality.

Conclusion: Patients with «late» response to CRT demonstrate higher rates of responders and super-responders and better dynamics in LVESV and LVEF compared to patients with «early» response. «Early» response and greater LVESV are associated with higher mortality rate. Thus, early clinical and functional improvement should not be used as a marker of the efficacy of CRT in terms of long-term mortality.

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PO058

Relationship of Sex Hormones Level In Men With Effect of Cardiac Resynchronization Therapy

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Introduction: It is known that cardiac resynchronization therapy (CRT) is effective in approximately 70% of congestive heart failure (CHF) patients. The influence of sex hormones on the effect of CRT has not been studied.

Objectives: To assess the relationship of sex hormones level with effect of CRT in men with CHF.

Methods: In 43 men undergoing CRT (mean age 55.3±8.0 years; 72% ischemic etiology) response to CRT was estimated as the best decrease of left ventricular end-systolic volume (LVESV) (29 [11.0;53.0] months). At baseline levels of testosterone (TES), progesterone (PGN), dehydroepiandrosterone (DHS), estradiol (E2) were evaluated. According to TES+E2 level patients were divided in: I gr. (n=8) - TES<median+E2>median; II gr. (n=11) - TES<median+E2<median; III gr. (n=10) - TES>median+E2<median, IV gr. (n=14) - TES≥median+E2≥median. Echocardiographic parameters, levels of NT-proBNP, interleukin (IL)-1β, IL-6, IL-10, tumor necrosis factor alpha (TNF-α), galectin-3, C-reactive protein, tissue inhibitors of metalloproteinase 1, 4 (TIMP-1, TIMP-4) in dynamics were measured.

Results: The number of responders (decrease in LVESV≥15%) was: 14.3% in I gr., 63.6% in II gr., 70% in III gr., 92.9% in IV gr. (p=0.005). I gr. showed least levels of TES (9.7±3.3; 11.3±2.0; 21.9±10.1; 22.0±9.1 nmol/L respectively; p<0.001), greater levels of E2 (52.3±17.0; 26.0±3.8; 27.2±8.4; 49.7±11.6 pg/ml respectively; p<0.001) and ratio of E2/TES (6.27±3.5; 2.38±0.6; 1.4±0.5; 2.5±0.9 respectively p<0.001), tendency to least level of PGN (1.18±0.46; 1.24±0.46; 1.39±0.71; 1.79±0.70 nmol/L respectively; p=0.077). IV gr. with high levels of TES, E2, PGN showed tendency to more dynamic of echocardiographic parameters: Δ end-diastolic volume of left ventricle (p=0.088), Δ end-systolic volume of left ventricle (0.098), Δ left ventricular ejection fraction (p=0.099); and dynamics of biomarkers: ΔIL-6 (p=0.059), ΔIL-10 (p=0.050), ΔTNF-α (p=0.017). ROC-analysis showed that only level of TES of all studied sex hormones which equals 13.8 nmol/L with sensitivity 63.4% and specificity 76.5% is a predictor of a positive respond to CRT (AUC=0.687; p=0.026).

Conclusion: The response to CRT in men is associated with level of sex hormones and the ratio of E2/TES. The level of TES which equals 13.8 nmol/L is a predictor of a positive response to CRT.

Disclosure of Interest: None declared

PO059

Prognostic Significance of Plasma Brain Natriuretic Peptide Among Heart Failure Patients In Ilorin, Nigeria

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Introduction: Although the usefulness of plasma brain natriuretic peptide (BNP) in early diagnosis of heart failure has been extensively studied, its value in predicting outcome of these patients has not been fully determined, particularly among African patients.

Objectives: This study was aimed at evaluating the prognostic implications of pre-discharge BNP among hospitalized Nigerian heart failure patients.

Methods: One hundred consecutive acutely decompensated heart failure patients managed in our center were recruited along with 100 age and sex-matched healthy controls for the study. All subjects had clinical and Echocardiographic evaluation for cardiac dysfunction. All participants had BNP assayed and were followed-up for six months.