

in 60 (43%) patients showing HbA<sub>1c</sub> greater than or equal to 8 (uncontrolled diabetes), normal function was found in 36 and diastolic dysfunction in 24, with a significant difference of BNP at multivariate analysis (OR = 1.03, 95%CI = 1.04–1.09, P = 0.002). In uncontrolled diabetic cohort, BNP was a strong predictor for LVDD (OR = 3.1, 95%CI = 1.5–6.1, P = 0.004) along with the duration of diabetes (OR = 2.1, 95%CI = 1.3–3.2, P = 0.034). BNP > 25pg/mL was a cut-off value with high accuracy to detect a LVDD.

**Conclusions.**— BNP could be a cheap, easy and useful tool to screen patients with preclinical ventricular diastolic dysfunction among those particularly prone to develop cardiovascular complications, such as uncontrolled diabetic patients.

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#### What are particularities in echocardiography and Doppler of diabetics with chronic heart failure?

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**Introduction.**— The prevalence of heart failure and diabetes are both increasing: 25 to 30% of patients with heart failure suffer from diabetes. Diabetics have more diastolic dysfunction because accumulation collagen in intramyocardial.

The objectives of our study are to compare echocardiographics and Doppler profiles of diabetics and non-diabetics.

**Patients and methods.**— We included 1351 patients, diabetics and non-diabetics, admitted in united of heart failure in our Center of Cardiology from May 2006 to October 2010. All patients were evaluated by echocardiography and Doppler.

The data are presented as numbers, percentages, and medians with interquartile range. The distribution of variables was compared between diabetics and non diabetics by Chi-square test with confidence intervals.

**Results.**— One thousand three hundred and fifty-one patients were studied, the median age was 63 years. Three hundred and sixty-seven (27%) are diabetics. Overall, it exists similarity of the parameters studied between the 2 groups diabetics and non-diabetics in terms of morphology and hemodynamics (end diastolic left ventricle volume; mitral regurgitation; interventricular septum size; pulmonary arterial systolic pressure; left atrial volume. . .). But we have found important differences of 3 parameters: ejection fraction of left ventricle was higher (48,5% and 35%) in diabetics group. We found more segmental kinetic disorders (76% and 50%) and more diastolic dysfunction with higher filling pressures (51% and 34%) in diabetic population.

**Conclusion.**— So, in our study, we have found more diastolic dysfunction and more segmental kinetic disorders but ejection fraction of left ventricle is higher in patients diabetics with chronic heart failure. In general, our results were consistent with most of the European and American studies.

These findings emphasize the importance of individualised management and need for more comprehensive recruitment of diabetics in clinical trials.

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#### Serial measurements of NT-proBNP are predictive of non-high dose anthracycline cardiotoxicity in breast cancer patients

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**Background.**— A well-known side effect of anthracycline's chemotherapy is cardiotoxicity. It consists in developing a dose-dependent cardiomyopathy with an incidence ranging from 2 to 20%. Assessment of biohumoral markers may be useful in early detection of subjects at high risk of developing cardiotoxicity, as demonstrate by studies carried out in patients undergoing a high-dose chemotherapy. However, there are few studies considering both the

measurement of natriuretic peptides and not-high-dose protocol of chemotherapy.

**Aim.**— The aim of the study was to evaluate the possibility of early detection of subjects at high-risk for developing left ventricular dysfunction in breast cancer patients undergoing non-high-dose chemotherapy (NHDC).

**Methods and results.**— In 71 patients treated with anthracycline NT-proBNP, CK-MB and cardiac Troponin I (cTnI) were evaluated before each drug administration and 24 hours after. Left ventricular dimension/function was assessed by echocardiography at baseline, every two cycles, at the end of chemotherapy, 3, 6 and 12 months during the follow-up. NT-proBNP, CK-MB and cTnI values were normal at baseline in all the patients. Throughout the chemotherapy, CK-MB were normal, cTnI was abnormal only occasionally in 4 patients, NT-proBNP showed abnormal values. According to these NT-proBNP modifications, the patients were divided into 2 groups: group A (50 patients), where normal values (23 cases) or temporary alterations (27 cases; i.e. increase at 24 hours and then decrease to normal values) were detected; group B (21 patients) with persistent NT-pro-BNP abnormalities throughout all the measurements. The Group B showed follow-up left ventricular impairment greater than the Group A. The percentage difference (baseline-peak) NT-proBNP was predictive for LV impairment at 3, 6 and 1-year follow-up; percentage difference (baseline-peak) NT-proBNP higher than 36% was predictive for LV impairment at the same follow-up interval times. **Conclusions.**— Serial evaluation of NT-proBNP may be a useful tool in order to early detect the patients at high-risk of cardiotoxicity, among those treated with NHDC.

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#### Contribution of right ventricular echocardiographic parameters in evaluation of the prognosis of dilated cardiomyopathy

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**Introduction.**— The evaluation of the prognosis of patients with dilated cardiomyopathy (DCM) is an essential step in their care. Doppler echocardiography is a noninvasive, reliable and available method for the diagnosis and also for the prognosis's study of these patients. But the study ultrasound of the right ventricle (RV) is not a part of the practice of the cardiologist.

**Purpose of study.**— Determine which of the echocardiographic parameters that assess systolic and diastolic function of the RV, those predicting of the occurrence of secondary cardiac events (death, hospitalization for decompensated heart failure and ventricular arrhythmias poorly tolerated) in patients with DCM.

**Materials and methods.**— Prospective study in 61 patients with DCM symptomatic heart failure (class II→IV NYHA) who are stable with medical treatment. All these patients received a conventional echocardiographic examination with emphasis on studying the RV parameters: fractional shortening surface RV (FRSRV), the systolic excursion of the tricuspid annulus to the TM (TAPS), and systolic pulmonary artery pressure (SPAP), that is completed by a study at tissue pulsed Doppler at the tricuspid annulus wave (Sa, Ea and Aa). All patients were regularly monitored. We studied the correlation between echocardiographic parameters of RV and the occurrence of secondary cardiac events.

**Results.**— There were 61 patients in a period from February 2006 to September 2007. The average age of patients was 62 ± 9.86 years (40 to 81 ans) with a sex-ratio of 2 m/1 woman. Forty-eight percent of patients were in NYHA class III. The average fractional ejection of left ventricle was 29 ± 7.2%. DCM was ischemic in 59% of cases. During follow-up (11 ± 5 months), 5 patients died, 22 were hospitalized for decompensated heart failure and 2 patients had a ventricular tachycardia. We have shown that the parameters predictors of mortality are: TAPS < 12 mm and a FRSRV < 33%. Parameters predictive