allied academies Joint Event on
International Conference on
CARDIOLOGY AND CARDIOVASCULAR MEDICINE
&
International Conference on
STEM CELLS AND REGENERATIVE MEDICINE
June 18-19, 2018 | Osaka, Japan
Biomed Res 2018, Volume 29 | DOI: 10.4066/biomedicalresearch-C2-006

RESTRICTIVE HEART REMODELING AFTER COMPLEX THERAPY OF BREAST CANCER

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Breast cancer treatment complications, including cardiotoxicity are most dramatic in spite of the increased number of survivours in last decades. Major findings in those are the worsening of systolic function regarding LVEF calculation and deformational indices. Indeed, same patients demonstrate HF symptoms despite "normal" LVEF, which need to be investigated.

Aim: regular assesment of heart remodeling and function was performed to find a substrate of HF symptoms in patients under complex treatment of breast cancer. Cohort of 40 women (27-58 y.o.) with HER2+ breast cancer was assesed by ECG, Echo, biochemical blood markers every 3 months after initial diagnosis and beginning of treatment. Among them 40 pts had metastatic cancer, 5 - primary breast cancer. Radiotherapy, surgery and chemotherapy were performed from 6 months to 10 years before initiation of trastuzumab treatment. Cardiotoxicity (symptomatic falling of LVEF>10% versus basal data) was revealed in one woman, who was excluded from present study. Nine patients met HF symptoms (NYHA I-II) and were treated with iACE, sartans, ivabradine.

Results: Shortening of long axis and decreasing of volume of both atrial chambers followed by the increasing of sphericity indices of LA and RA in groups . Patients of groups of treatment had negative dynamics of systoilc longitudinal deformation of both ventricles (for both $p<0,05$). Decreasing of systolic deformation and restrictive chamber remodeling correlated to exercise intolerance and HF symptoms ($p<0,02$). No patients had decreasing of LVEF (pair t-test, $p>0,05$).

Conclusion: all patients demonstrated decreasing of atrial chamber short axis and volume. Less dramatic remodeling and HF symptoms were found in patients with monotherapy of trastuzumab. Atrial restrictive remodeling was revealed in patients treated subsequently by radiotherapy, anthracyclines and inhibitors of HER2neu+ receptors and followed by the worsening of ventricular systolic deformation and HF progress.