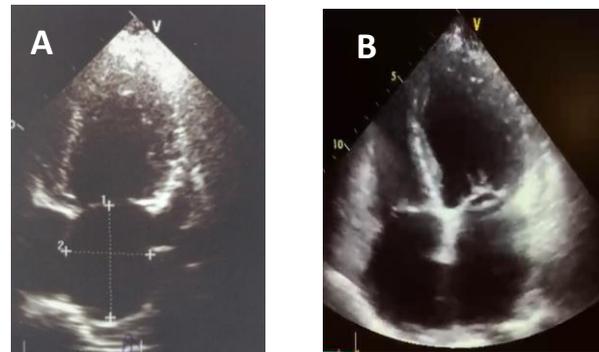


**Background:** In most cases, influence of chemotherapy on cardiovascular system is established, when cardiac remodeling has already begun. Nowadays, the search of drugs that can neutralize negative effects of previous chemotherapy courses is a priority area of cardio-oncology.

**Case:** 38-year-old patient with follicular lymphoma stage IV B was presented to cardiology department with complaints of progressive dyspnea. Patient had 4 chemotherapy courses, that included doxorubicin (cumulative dose of 414 mg/m<sup>2</sup>). Few months after the last course dyspnea appeared. Echocardiography showed ejection fraction (EF) decrease to 23%, right and left heart chamber dilation and pulmonary hypertension, so dyspnea was considered as a congestive heart failure (HF) symptom. ECG: sinus rhythm with 74 bpm and incomplete left bundle branch block. NT-proBNP level was 2380 pg/ml. 6-minute walking test distance was 280 meters (III functional class NYHA). Taking into consideration low blood pressure values and episodes of significant hypotension (80/60 mm Hg) in anamnesis, it was decided to start HF therapy with ivabradine, eplerenone and low ACEI doses (enalapril 1,25 mg bid) with titration to maximum tolerated. After enalapril dose titration to 10 mg bid, it was changed to sacubitril/valsartan 50 mg bid. After 3 weeks the dose was increased up to 100 mg bid. In one month, echocardiography was repeated: EF increased up to 46%, mean pulmonary arterial pressure decreased to 20 mm Hg and also both ventricular size reduction was observed. Sacubitril/valsartan, ivabradine and eplerenone therapy was continued. Dyspnea regressed, so that patient could return to his usual lifestyle with high physical activity.

**Discussion:** This case illustrates that sacubitril/valsartan can improve not only clinical state, but also reverse heart remodeling parameters of cardio-oncological patients with heart failure. Transition from HF-rEF to HF-mrEF group may be described as heart failure with improved ejection fraction, and can be associated with better prognosis.



**Figure 1** Transthoracic echocardiography before (A) and after (B) treatment with sacubitril/valsartan

## References:

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