

## 5 CARDIAC RESYNCHRONIZATION THERAPY IN PATIENT WITH HFREF

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**Introduction.** Heart failure (HF) is a global pandemic clinical syndrome at least affecting 26 million people around the world and is still increasing dramatically in prevalence especially among the aging population despite the significant advances in therapies and preventions. The prevalence increases with age: from around 1% for those aged <55 years to >10% in those aged 70 years or over. It is generally believed that of those with HF, about 50% have heart failure with reduced ejection fraction (HFrEF). Pharmacotherapy is the cornerstone of treatment for HFrEF and should be implemented before considering device therapy, and alongside non-pharmacological interventions. In appropriately selected individuals, cardiac resynchronization therapy (CRT) reduces morbidity, mortality, improves cardiac function and enhances QOL.

**Case presentation.** An 81-year-old female came to the hospital by herself with complains of dyspnea, progressive decreasing in tolerance to physical activity, palpitation, fatigue, ankle swelling and tender hepatomegaly, headache. She has a history of 25 years of Hypertension, max value of BP was 210/110 mmHg, and was not adherent with her drug therapy, two episodes of syncope and diabetes mellitus. Physical examination on admission revealed pale skin, acrocyanosis, leg edema, HR 66 bpm, BP -180/80 mmHg, SO<sub>2</sub> -94%. Rest ECG shows sinus rhythm (SR), large QRS -169 ms, LBBB, and premature extrasystole. Echocardiography shows EF -29%, enlargement of diameter in all cardiac chambers, mitral IV, tricuspid III and pulmonary II regurgitation and diastolic dysfunction. NT-proBNP-5749ng/ml. The diagnosis of Hypertension grade III, high risk. HF IV class (NYHA), stage D was confirmed and treatment with torsemide, spironolactone, hydrochlorothiazide, lisinopril, bisoprolol was started.

**Discussion.** After continuous pharmacological treatment alongside the non-pharmacological, this patient still present with dyspnea at rest and signs of liquid retention, which make us to revised the particularities of case: symptomatic patients with HF in SR with a QRS duration 150 ms and LBBB QRS morphology and with LVEF less or equal to 35% despite OMT). According ESC guideline was established class A indications to CRT and patient was referred to interventional department for device implantation.

**Conclusion.** Therapeutic management of patients with heart failure is multidimensional and depends on the ECG, EcoCG particularities and comorbidities. CRT plays an important role in special cases of HF and it is expected to improve EF, symptoms of HF, the quality of life and reduce the chance of death or the development of any fatal cardiac event all along with cardiac rehabilitation program and pharmacological treatment.