

The Atrial Ejection Fraction as Marker of Systolic Left Ventricular Recovering

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Introduction:

Left atrium plays an important role in filling of the left ventricle because is a reservoir of expansion during systole and by an active phase when sinus rhythm is presented, during late diastole. If the patient is in sinus rhythm and heart failure the left ventricular compliance is decreased thanks to the active phase. If the patient is in atrial fibrillation the cardiac output decreases in 15-20%. Left atrial function has an important role in prognosis in patients with heart failure.

Aim:

Our aim was to determine the atrial ejection fraction in patients with heart failure in atrial fibrillation with high ventricular response and after pharmacologic or cardioversion treatment. Only in patients clinical and hemodynamic stable and which no required tracheal intubation.

Methods:

We performed a study of atrial ejection fraction in 50 patients with heart failure during atrial fibrillation with a high ventricular response. We calculate left atrial size and volume by Doppler and tissue Doppler in atrial fibrillation and after recovering to sinus rhythm. The function was characterized by an increasing of the pump function measured by wave Doppler across mitral valve.

Results:

Our study has demonstrated that left atrial function increases during heart failure as a compensative mechanism and support to left ventricular function. Atrial ejection fraction represents a physiologic assessment to sinus rhythm maintenance in patients with heart failure secondary to rapid atrial fibrillation.

In most of the patients, the atrial ejection fraction decreased when a consecutive Doppler study confirmed atrial fibrillation as a basic rhythm. In those patients (14) the atrial ejection fraction improved in patients who remained sinus rhythm.