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Temat: *„Ocena wyników leczenia pacjentów terapią resynchronizującą serca z uwzględnieniem jakości życia”*

SUMMARY

Introduction

Cardiac resynchronization therapy (CRT) is an established treatment option for patients with chronic heart failure, lowered ejection fraction of the left ventricle and prolonged QRS duration. However, about 20-40 % patients do not benefit from this method. The effectiveness and safety of this procedures is very important. The aim of this study was to determine it for the first time in our region. Quality of life (QoL) is crucial for patients with heart failure, so this study was tend to evaluate QoL especially in patients who don't respond for CRT .

Material and methods

The study population consists of 45 consecutive patients, with symptomatic chronic heart failure, who had procedure of implantation of CRT in our department and met the inclusion criteria for CRT in accordance with the ESC guidelines. Three patients were excluded due to procedural complications.

Patients were followed for 12 months. During the examinations after 6 and 12 months after implantation, clinical (6-minute walk test, NYHA class), echocardiographic parameters (LVESV, LVEF) and quality of life were evaluated. For the assessment quality of life we used the SF-36 Health Survey, which consists of several subscales QoL. During hospitalization at 6 months LVESV was compared to baseline to qualify patients as responders or non-responders resynchronization therapy. Patients with at least 15% reduction LVESV and without hospitalization for heart failure decompensation, were eligible to a group of responders. Patients who have not been admitted to the group of responders were performed to optimize settings for AV and VV delay in control echocardiography.

Results

After 6 months 29 patients (69 %) experienced a significant benefit in cardiac resynchronization therapy. They had characteristic reverse remodeling of left ventricle with improvement of NYHA class, with increase of distance in 6MWT. Mean LV end-systolic volume (LVEsV) reduced from 175,4 ml to 109,3 ml ($p<0,001$). Mean LVEF improved from 20,6 % to 31,3 % ($p<0,001$). After 12 months we found no further significant reduction in the volume of end-systolic left ventricular function. Left ventricular ejection fraction, NYHA class, as well as walking distance to the 6MWT also did not change significantly.

After 6 months quality of life (QoL) has improved in all of the subscales of SF-36 questionnaire regardless of response group. Statistically significant differences indicated only in Physical Component Summary (PCS), without differences in Mental Component Summary (MCS). After 12 months we have found deterioration of almost all domains of QoL in non-response group. Results did not vary significantly according to response group after 6 and 12 months. Neither clinical response nor echocardiographic one, was associated with improved QoL in CRT recipients.

Device-related adverse events occurred to 6 persons, mainly concerning electrodes. During the follow-up period only two patients had inappropriate ICD shocks.

Conclusions

1. The effectiveness of cardiac resynchronization therapy in our center is comparable to literature data. Procedures of implantation are safe and low risk of complications.
2. In patients responding positively to resynchronize (responders), a characteristic reverse remodeling of the left ventricle, the improvement of the NYHA class and the improved assay 6-MWT was observed.
3. In the entire study population after 6 months of treatment significantly improved physical functioning, with no significant improvement in mental components of quality of life.
4. After 12 months of observation, there was no further improvement in quality of life, and in the group corresponding to the resynchronization (non-responders) a tendency to deterioration of most of its components was showed.
5. Quality of life does not correlate with objective parameters of echocardiographic and clinical (NYHA class, 6MWT).