

## **FUNCTIONAL BLOOD CIRCULATION VALUES IN PATIENTS WITH CRT IN THE EARLY POSTOPERATIVE PERIOD IN DIFFERENT QRS COMPLEX DURATION CLASSES**

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Fourteen patients in age ( $69 \pm 7$ ) years who underwent CRT were examined. The indications for cardiac resynchronization therapy (CRT) were chronic heart failure (CHF) II-IV, left ventricular ejection fraction (LVEF)  $< 35\%$ , QRS complex duration more than 120 ms. The levels of systolic and diastolic blood pressure (BP), QRS complex duration as well as LVEF, end-diastolic volume (EDV) and end-systolic volume (ESV), the thicknesses of interventricular septum (IVS) and posterior wall (PW) of the left ventricle, the sizes of the left (LA) and right (RA) atrials and right ventricular (RV) were assessed before pacing therapy and in the early postoperative period (3-5 days after implantation). The stimulated QRS complex duration was measured in ECG leads II, V5, V6 and with selecting the highest measured value.

The patients were divided into 2 stimulated QRS complex duration classes: class 1 – 120-150 ms, class 2 – more than 150 ms. The data were brought into the Microsoft Excel base. For statistical evaluation of the results were used the parametric criteria (the mean – M, the average deviation – sd). The probability of differences between groups was determined using a non-parametric U-Mann-Whitney test. The likely result is determined by the levels of reliability  $p < 0.05$ .

CRT significantly reduced EDV and initially high ESV in both QRS complex duration classes, affected the initially reduced EF and contributed to its increase in class 3 ( $p < 0.05$ ), the trend towards increasing was seen in class 2. CRT did not affect the interventricular septum and PW LV thicknesses, which of were the same value as before the implantation.

It was concluded that the severity of CRT beneficial effects was significantly better for patients with  $QRS \geq 150$  ms vs. patients with  $QRS < 150$  ms. QRS complex duration was decreased by 15 % in class 1 and by 9 % in class 2.