

Registry of Cardiac Resynchronization Therapy and impact on heart failure patients at Critical Care Department.

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Abstract

Background: Cardiac Resynchronization Therapy(CRT) has been proposed as a treatment of patients with idiopathic as well as ischemic left ventricular dysfunction with drug refractory heart failure and intra–or interventricular conduction delay. CRT improves heart failure, reduces the risk of death and improves the status of LV dysfunction. It is indicated in patients with LVEF \leq 35%, NYHA class II /III and ambulatory class IV, a wide QRS complex \geq 150 ms.

Objective: to detect the patients subjected to CRT implantation at critical care department, monitoring and evaluating the patients as regards implantation, follow up, detection and management of complications and to detect the effect of CRT on clinical outcome and echocardiographic changes in patients subjected to CRT within months after implantation.

Patients and Methods: A retrospective and prospective study which covered the period from January 2007 to December 2013 involving 180 patients (146 males and 34 females with a mean age of 56.7 ± 8.7 years) who were subjected to CRT implantation at Critical care department, Faculty of medicine, Cairo University. Patients were assessed before implantation by history taking, clinical examination, ECG and Echo parameters and NYHA class and then the patients were reevaluated after six months at follow visits to detect CRT effect on clinical outcome, ECG changes, Echo parameters and to detect and manage the complications if occurred. The data were obtained from the follow up files, main archiving system and computerized filing system of critical care department, Cairo University.

Results: The study included 180 patients who were subjected to CRT implantation from January 2007 till December 2013, There was a significant improvement in EF %, left ventricular dimensions, width of QRS complex and NYHA class (P-value $<$ 0.001) six months after CRT implantation. There was a significant improvement in EF% as the percentage of decrease of QRS complex width increased after CRT implantation. About 58 % of patients were responders and 42 % were not responders according to improvement in EF \geq 10% and improvement in NYHA class \geq 1 class. The rate of complications was low (13.8%) and all complications were managed successfully.

Conclusion: CRT has emerged as an effective therapy for symptomatic heart failure. Our study included 180 patients 58% of them were responders and 42 % were non responders. The small rate of complications that occurred reflects the increased experience of pacing team in Critical care department, Faculty of medicine, Cairo University.