

The Impact of Combined Resynchronization and Implantable Defibrillator Therapy on Mortality in Patients with Narrow QRS vs. Wide QRS Complex

Michal Palombo^{1,2}, Arthur shiyovich^{1,2}, Amos katz^{1,2}, Ygal Plakht², Viktoria Khazan¹,
Sari Cohen¹, David Ben Shuhsan², Vladimir Khalameizer¹

¹ Cardiology Department, Barzilai Medical Center, Ashkelon, ² Faculty of Health Sciences,
Ben Gurion University of the Negev, Beer-Sheva, Israel

Background – Combined cardiac resynchronization therapy (CRT) and implantable defibrillator (ICD) therapy reduced all cause mortality in patients with systolic heart failure and wide QRS. Conflicting data exist regarding the effects of ICD-CRT on mortality in patients with narrow QRS.

Objective - To evaluate the impact of combined ICD-CRT implantation in patient with systolic heart failure on all cause mortality, comparing patients with narrow QRS and wide QRS.

Methods - The medical records of all patients who underwent an ICD-CRT implantation in Barzilai Medical Center between 06/2005 -12/2007 were reviewed. Narrow QRS was defined as < 120 msec and wide QRS ≥ 120 msec. Mortality data were collected until 11/2008. Survival curves were constructed by the Kaplan Meier method and compared by the log-rank (Cox-Mantel) test.

Results – A total of 161 pts. qualified for this study, mean age 67.2 ± 9.3 years, 79% male; 69 (43%) with a narrow QRS and 92 (57%) with a wide QRS; Mean EF $23.5\% \pm 7\%$; Mean NYHA FC = 3 ± 0.5 . Median follow up was 20 months. Overall 20 pts (12%) died, 13 (15%) with wide QRS, and 7(10%) with narrow QRS. Pts with wide QRS were older than those with narrow QRS [68.49 ± 7.99 vs. 64.17 ± 10.42 , respectively ($p=0.005$)], otherwise the two groups were similar. One year mortality rate was higher in pts with wide QRS compared to pts with narrow QRS (13% vs. 4% respectively, $p=0.06$). However, three year mortality rates were similar in the two groups (14% vs. 10% respectively, $p=0.42$).

Conclusions – One year mortality rate seems to be lower in pts with narrow QRS compared to those with wide QRS following ICD-CRT implantation. This difference is not maintained after 3 years.