Cardiac resynchronization therapy (CRT) has become one of the main therapeutic alternatives for advanced congestive heart failure (CHF), but the effects on morbidity and mortality are still unclear.

**Aim of the Study**

To analyze hospitalization rate and mortality - total mortality (TM) and cardiac mortality (CM) - in a wide patient population implanted in our institution in the last six years.

**Methods:** Since 1999, 187 pts (158 male) underwent CRT for severe CHF (EF ≤26.3% ± 6.9). In 82 pts a backup ICD was associated. The mean age was 71.1 ± 8.8 years (range 36 to 92). 103 pts (53%) had ischemic heart disease (IHD) while 84 were non ischemic (NIHD); 36 pts were in atrial fibrillation at the time of implant; 46 were previously paced via the right ventricular apex; 16 were candidates for heart transplantation. All the pts were evaluated in our clinic and the follow-up was scheduled every three month for the first year and then twice a year.

**Results:** The implant success rate was 98.9%. The mean follow-up was 29±16 months (range 1 – 74 months). Compared to the year before CRT, a significant decrease in hospitalization rate was observed during the first year of follow-up (2.3±1.6 vs. 0.56±0.7, p<0.001). TM was 10.7%, CM was 8.0%. The ICD group shows a reduction of TM compared to the group without: 7.3% vs. 13.3% - 46%.

**Conclusions:** CRT decreases the hospitalization rate and increases survival; it seems to have a worse prognosis than NIHD in term of TM and CM; CAF increases long term mortality rate in CRT pts.

**TABLE 1**

<table>
<thead>
<tr>
<th>Implant</th>
<th>6 months</th>
<th>1 year</th>
<th>2 years</th>
<th>3 years</th>
<th>4 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6%</td>
<td>3.3%</td>
<td>6.1%</td>
<td>11.1%</td>
<td>16.7%</td>
<td>21.7%</td>
</tr>
</tbody>
</table>

**DISCUSSION**

In conclusion, reduction of FT during CRT implant it is a matter of operator experience more than of lead technology.

2.4 **THE EFFECTS ON MORBIDITY AND MORTALITY OF CRT IN HEART FAILURE**


Division of Cardiology, General Hospital, Rovigo, Italy

Results:

In the group of IHD vs. NIHD, TM was 11.6% vs. 9.5% and CM was 10.7% vs. 4.7% respectively. The main causes of death in IHD were heart failure (8 pts) and sudden death (3 pts). In NIHD 3 pts died from cancer and 1 due to acute abdomen.

**Conclusions:**

1. The benefit of CRT is similar in IHD and NIHD. 2) IHD seems to have a worse prognosis than NIHD in term of TM and CM. 3) CRT decreases the hospitalization rate and increases survival; 4) the association with a back-up ICD strongly reduces the mortality in this population.

2.5 **CARDIAC RESYNCHRONIZATION THERAPY IN CHRONIC ATRIAL FIBRILLATION: AN INSYSN REGISTRY LONG TERM FOLLOW-UP**


Fatebenefratelli Isola Tiberina Rome, °Niguarda Hosp, Milan °San Giovanni Hosp, Rome-Rome-Italy

CRT in patients who have atrial fibrillation (CAF) has not been studied extensively. The aim of the study was to evaluate clinical response and long-term survival rate of CRT in patients who have CAF and compare it to sinus rhythm (SR) patients.

**Methods:** 952 patients enrolled in the insync Italian Registries were followed for 21±16 months: at implant 795 pts were in SR, whereas 157 pts were in CAF.

**Results:**

During follow-up, 153 pts (16%) died for any cause: 115 (14%) in SR group and 38 (24%) in AF group. All-cause mortality rate was 8 per 100 pts/year in SR and 14 in AF (p=0.05). Relative risk: 1.89 (95% CI 1.25 to 2.86; p=0.003) in AF group versus SR group.

**Conclusions:** CAF increases long term mortality rate in CRT pts.

2.6 **BIVENTRICULAR PACEMAKER OR ICD? THE ROLE OF SYNCOPE**


San Luigi Gonzaga Orbassano Torino, Italy

The purpose of this study is to clarify the efficacy and safety of bepridil for persistent atrial fibrillation (AF).

**Method:** Bepridil (100-200mg/day) was administered to 159 patients (141 males, 58 years) with persistent AF. The effects of conversion and maintenance of sinus rhythm (SR) were evaluated. If sinus restoration was not obtained until 3 months observation, DC cardioversion was performed.

**Results:** In 87 of 159 patients (55%), SR was restored within an average 2.1 months following administration of bepridil. 74 of those 87 patients (85%) have been maintained in SR for the average follow-up of 16 months. The 31 out of remaining 72 patients failed pharmacological conversion were performed DC cardioversion. All of patients restored SR, and 18 of them (58%) could be maintained SR for an average of 20 months. Although ECG revealed significant prolongation of QT interval from 0.38 to 0.42 sec, qtc was unchanged and no serious adverse complications including torsade de pointes were recognized.

**Conclusions:** Bepridil is clinically safe and useful with favorable efficacy for conversion and maintenance of SR in patients with persistent AF.

2.7 **SEVERE CONGESTIVE HEART FAILURE. WHICH DEVICE DO PATIENTS REALLY NEED?**


Favaloro Foundation. Buenos Aires. Argentina

**Objective:** To evaluate demographic, electrocardiographic and ventricular function criteria of patients (pts) with severe CHF and analyze how many of them may benefit from AICD, CRT or AICD-CRT, according to SCD-heft, COMPANION and CARE-HF Trials.

**Methods:** 250 pts with severe CHF were analyzed. 1) Demographic criteria: age, gender, NYHA class. 2) ECG: rhythm, PR interval, QRS duration (qsd). 3) Ventricular function: LVDD and LVEF.

**Results:** 1) 53±14 years of age, 87% were male, 69 pts (28%) had NYHA class II, 104 (42%) class III and 65 (26%) class IV. 2) 202 pts (81%) had sinus rhythm and 48 (19%) atrial fibrillation. PR interval was 197±38ms. Qsd was 135±37ms. Qsd 210ms: 142 pts (57%). 3) LVDD was 72±11mm and LVEF was 21.8%. According to SCD-heft 167 pts (67%) should receive AICD. Considering CARE-HF 90 pts (36%) could be candidates for CRT. Taking into account COMPANION trial 69 pts (28%) could benefit from AICD-CRT.

**Conclusion:** According to the results of recently published trials, in this study population, a high number of pts with severe CHF should receive AICD, CRT or AICD-CRT.

22. MISCELLANEA