Long-term effects of music therapy on patients with heart failure and acute myocardial infarction after previous revascularization; 8-year experience

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Background:

- Patients who have clinical evidence of congestive heart failure (CHF) after acute myocardial infarction (AMI) and previous coronary artery bypass grafting (CABG) have a poor prognosis. Unrelieved anxiety can produce an increase in sympathetic nervous system activity leading to an increase in cardiac workload.
The Aim:

- The purpose of this study was to evaluate the effectiveness of music therapy for reduction of new coronary events (NCE) in patients with CHF and AMI after previous CABG.
Methods 1:

- 740 patients (males 82.4%, mean age 58.9 ± 7.2 yrs) with AMI after previous revascularization have been selected from the patients consecutively submitted from April 1990 to January 2010. The patients with early perioperative AMI were excluded from the study. The average time interval from CABG to AMI was 92.6 ± 14 months. The average number of grafts was 3.2 grafts/pts.
Methods 2:

• CHF was registered in 251 (34%) pts with AMI after previous CABG. All patients with CHF were randomized and divided in 2 groups: Study group of 126 patients treated with music therapy and Control group of 125 patients with no music therapy. Each patient in study group underwent two sessions of medical therapy (12 minutes) in a day. Both groups were similar in baselines, post-AMI characteristic and post-AMI medical therapy.
Results:

• Comparing parameters of Study and Control group of patients in 8-year follow-up period, Study group had lower anxiety score ($r=-0.20$, $p=0.12$) with statistically significant reduction in systolic blood pressure ($p=0.0018$), diastolic blood pressure ($p=0.0036$), heart rate ($p=0.0146$), angina ($p=0.0094$), reinfarction ($p=0.0198$), sudden deaths ($p=0.0402$) and reoperation ($p=0.0086$).
**Conclusions:**

- This study provides support for the use of musical therapy in patients with CHF and AMI after previous revascularization to reduce blood pressure, heart rate and new coronary events expression. These effects of music therapy are probably because of decreasing in sympathetic nervous system activity.