POSTER SESSION

1166

Atrial Fibrillation
Tuesday, March 09, 2004, 3:00 p.m.-5:00 p.m.
Morial Convention Center, Hall G
Presentation Hour: 4:00 p.m.-5:00 p.m.

1166-207

Long-Term Sensitivity and Positive Predictive Value of Symptoms as an Index of Atrial Tachyarrhythmia Recurrence in Paced Patients: A Report of Device-Based Monitoring in the Natural History of Atrial Fibrillation Trial
Adam Strickberger, John Ip, Sanjeev Sakseka, Kenneth Curry, Tristram Bahnson, Douglas Hettrick, Paul Ziegler, University of Michigan, Ann Arbor, MI

Background: The short-term reliability of patient reported symptoms as a marker of atrial tachyarrhythmia or atrial fibrillation (AT/AF) recurrence has been studied. However, the long-term correlation of symptoms with continuous monitoring of AT/AF episodes during pacing is unknown.

Methods: This prospective multicenter trial assessed the development of AT/AF in paced patients by examining the correlation of patient-reported symptoms with device-detected AT/AF events in a subset of patients who had documented AT/AF episodes during the one-month lead-in period. Patients were followed for an additional 12 months and were contacted weekly to ensure compliance with activator usage. Episodes were classified as symptomatic AT/AF, asymptomatic AT/AF, or symptomatic “non-AT/AF” depending on concordance between patient-reported symptoms and device-detected AT/AF events.

Results: Of the 48 patients (28 M, 76±10 yr) who were implanted and followed for 12±2 months, arrhythmia-related symptoms were noted in 8% of all device-detected AT/AF episodes (sensitivity). Only 19% of all patient symptoms were associated with device-detected AT/AF events (positive predictive value). A paired analysis in a subset of patients (n=15) with both symptomatic and asymptomatic stored episodes indicated no difference (p=NS) with respect to median ventricular rate (94 vs 94 bpm), atrial and ventricular cycle length, EGM, and duration of AT/AF episodes. Patients logged symptomatic events into the device memory via an external manual activator. Following a one-month lead-in period, patients were followed for an additional 12 months and were contacted weekly to ensure compliance with activator usage. Episodes were classified as symptomatic AT/AF, asymptomatic AT/AF, or symptomatic “non-AT/AF” depending on concordance between patient-reported symptoms and device-detected AT/AF events.

Conclusion: Sensory AT/AF accounts for a significant proportion of the total AF burden. Further studies to elucidate the outcomes for this subgroup of AF patients will be of immense public health importance.

1166-211

Magnesium Effectively Prevents Postoperative Atrial Fibrillation in Patients After Heart Surgery: Meta-Analysis of Randomized Trials on 2,040 Patients
Eugene Crystal, Saul Miller, Michael Garfinke, Stuart Connolly, Ching Lau, Schulich Heart Center, University of Toronto, Toronto, ON, Canada, McMaster University, Hamilton, ON, Canada

Background: Atrial fibrillation is a frequent and clinically important complication of heart surgery. Magnus has been evaluated as a method of prophylaxis for the prevention of postoperative atrial fibrillation in a number of small trials with inconsistent results.

Methods: A literature search and meta-analysis of the randomized control studies published since 1986 was performed using the Cochrane methodology.

Results: Eighteen randomized trials were identified, enrolling a total of 2040 patients. Study sample size varied between 20 and 200 patients. Magnesium administration decreased the proportion of patients developing postoperative atrial fibrillation from 28% in the control group to 17% in the treatment group (odds ratio 0.91; 95% Confidence Interval, 0.79 to 1.02). Data on length of stay was available from 6 trials (827 patients). Magnesium did not have a significant effect on length of stay (weighted mean difference -0.07 days of stay, 95% Confidence Interval -0.78, 0.63). The overall mortality was low (0.7%), and was not affected by magnesium administration (odds ratio 0.90, 95% CI 0.24; 3.52).

Conclusion: Magnesium administration is an effective prophylactic measure for the prevention of postoperative atrial fibrillation. The magnitude of the effect of magnesium is similar to this of beta-blockers or amiodarone. Magnesium does not affect significantly length of stay or in-hospital mortality.

1166-212

Pulmonary Vein Isolation in Patients With Prior Cardiac Surgery
Raed H. Abdeljab, Jennifer Cummings, Oussama Wazni, Marc Gillinov, Andrea Natale, Nassir F. Marrouche, Cleveland Clinic Foundation, Cleveland, OH

Background: Pulmonary vein isolation (PVI) has become a treatment option for patients with symptomatic atrial fibrillation (AF) resistant to medical therapy. The outcome of this procedure in patients who developed AF after cardiac surgery has not been established.

Methods: Out of 454 patients who had PVI for symptomatic AF resistant to antiarrhythmic medication, we identified 38 patients with prior cardiac surgery who subsequently underwent PVI. The baseline characteristics and the recurrence rate in patients with prior cardiac surgery to the rest of the cohort.

Results: Patients with cardiac surgery did not differ in their age (58 ± 10 vs. 54 ± 12 years), duration of AF (6.2 ± 3.2 vs. 5.9 ± 4.3 years), and length of follow up after PVI (456 ± 187 vs. 515±192 days). Patients with prior cardiac surgery had larger left atrial diameter (4.8 ± 1.2 vs. 4.1 ± 0.5 cm, P = 0.02), and lower left ventricular ejection fraction (47 ± 14 vs. 54 ± 11 %, P = 0.03). There was no significant difference in AF recurrence in patients with prior cardiac surgery compared to the rest of the cohort (11% vs. 18%, P = 0.9). Neither ejection fraction nor left atrial size predicted recurrence of AF.

Conclusion: From our preliminary data, PVI seems to be feasible and effective even in patients with prior cardiac surgery. Therefore, history of cardiac surgery should not be considered an exclusion criterion for this procedure.