POSTER SESSION

1211MP Moderated Poster Session...Atrial Fibrillation: Demographics to Ablation

Tuesday, April 01, 2003, 3:00 p.m.-5:00 p.m.
McCormick Place, Hall A

3:00 p.m.

11211MP-163 Radiation Exposure on Paroxysmal Atrial Fibrillation Catheter Ablation

Mauricio Scanavacca, Nelson Samesima, José Caballero, Raul Sartini, Silvano Diangelo, Fernando Piza, Carina Hardy, Eduardo Sosa, Heart Institute (Incor), University of São Paulo Medical School, São Paulo, Brazil

Background: The pulmonary veins disconnection (PVD) with radiofrequency (RF) catheter ablation is a new developing technique to treat paroxysmal atrial fibrillation (PAF). It is a long procedure (3 to 4 hours) and a second performance is not uncommon. Objective: To quantify the radiation exposure for patient and operator during PAF RF catheter ablation. Methods: Radiation exposure using a pulsed fluoroscopy (7 frames/s) was analyzed in nine consecutive patients submitted to PVD procedure (7 male; mean age: 53+/-13y; 3+/-1 PVD/patient). Four thermoluminescent dosimeters (TLDs) were used to measure the absorbed radiation in each patient: two on the anterior chest and two on the back (right and left). The operator's exposition was evaluated by two TLDs, one under the plumber shield (abdomen) and one next to the face. Another TLD was left 7 feet away from the X ray source to evaluate the staff radiation exposure. Results: The X ray total dose and the mean dose per procedure for the patients, operator and staff are shown in table 1. The maximum permissible annual dose exposure according to the Nuclear Energy National Commission is 500mSv. The mean procedure time was 233+/-30min and the mean X ray time was 13+/-2min. Conclusion: The amount of absorbed radiation in PAF RF catheter ablation is quite acceptable to the operator and staff but it is high to the patient. If a second PAF RF ablation procedure is necessary before one year, the patient might be excessively exposured to radiation.

Table 1: X Ray Dose Distribution

	Patients	Operator		Staff
		Abdomen	Face	
X ray total dose (mSv)*	2682	0,4	2,4	0,3
Mean X ray dose/procedure (mSv)	298	0,04	0,26	0,03

3:12 p.m.

1211MP-164 Importance of the Right Inferior Pulmonary Vein in Initiation and Recurrence of Atrial Fibrillation

Nassir F. Marrouche, Walid Saliba, Alejandro Perez-Lugones, Eduardo Saad, Mandeep Bhargava, Oussama Wazni, Mustaphasahim Shaaraoui, Ahmad Abdul-Karim, Robert Schweikert, David Martin, Dianna Bash, Andrea Natale, The Cleveland Clinic Foundation, Cleveland, OH

Background: Electrical ostial isolation of pulmonary veins (PVs) has been proven to be effective in curing patients with atrial fibrillation (AF). Whether is important to isolate the right inferior pulmonary vein remains unclear. In this study we report the role of the right lower PV in initiation and recurrence AF. Methods and Results: Three hundred and eighty one patients presented for circular mapping guided PVs isolation (290 men; mean age 54±11 years) for treatment of symptomatic AF. Arrhythmogenic PV (APV) initiating atrial premature contractions causing AF was defined in the first 211 patients. Fifty-two (15%) out of 354 arrhythmogenic PVs were RIPVs. Out of 381 patients 68 (18%) experienced recurrence of AF after a mean follow-up of 310±105 days. Twenty two out of 68 patients underwent a 2nd PV isolation procedure. In 22% of these patients (5/22) the RIPV was defined to be the APV causing AF at follow-up. Conclusion: From our preliminary experience, the right lower PV is responsible for initiation of AF in at least 15% of patients presenting with AF. Isolation of the RIPV should always be considered in patients with AF in order to maximize long-term cure.

3:24 p.m.

1211MP-165 High Prevalence of ACE DD and Genotype in Patients With Atrial Fibrillation

Antonio Michelucci, Francesca Gensini, Luigi Padeletti, Cinzia Fatini, Elena Sticchi, Mirella Coppo, Andrea Colella, Paolo Pieragnoli, Nicola Musilli, Maria C. Porciani, Rosanna Abbate, Daniela Poli, GianFranco Gensini, University of Florence, Florence, Italy

Increased expression of angiotensin converting enzyme (ACE) in atrial tissue of patients with atrial fibrillation (AF) suggested the involvement of Renin Angiotensin System in AF. Previous results from our group suggested a different distribution of ACE polymorphism in AF. In a larger sample (208 pts with persistent AF and 210 controls) ACE I/D polymorphism genotype distribution and allele frequency were different between pts and controls (chi(2)= 36.26, p<0.0001 and chi(2)= 33.57, p<0.0001, respectively). At univariate analysis ACE DD genotype was associated with the risk of AF (OR DD/ID+II=2.64, p<0.0001). The analysis of endothelial NO synthase (eNOS) T-786-C, G894T and 4a/4b polymorphisms did not show a significant difference in the genotype distribution and allele frequency between pts and controls but a slight difference in 4a/4b eNOS polymorphism was observed. These data confirm that ACE I/D polymorphism is involved in AF; the possible role of altered NO synthesis requires to be furtherly investigated.

3:36 p.m.

1211MP-166 Angiotensin Converting Enzyme Inhibitors Do Not Prevent Supraventricular Tachyarrhythmias: Evidence From the SOLVD Trial

Keith A. Kyker, Omer L. Shedd, Jamie B. Conti, Mario D. Gonzalez, Anne B. Curtis, University of Florida, Gainesville, FL

Background: Recent data has suggested that the incidence of atrial arrhythmias may be reduced by treatment with ACE inhibitors, possibly by provention of atrial electrical remodeling.
Methods: We reviewed data from the Studies of Left Ventricular Dysfunction (SOLVD) Trial, a prospective, randomized, multicenter clinical trial in which patients with left ventricular dysfunction and Class II-IV heart failure were treated either with enalapril or placebo, with the primary endpoint being total mortality. During follow-up, the occurrence of any supraventricular tachycardia (SVT), mainly atrial fibrillation in a heart failure population, was recorded as: (1) a diagnosis causing hospital admission, or (2) SVT requiring treatment or cardioversion. A total of 1,130 patients with specific documentation of the presence or absence of SVT were included in this review.
Results: In these 1,130 patients, 2.9% (18/624) of the enalapril treatment group versus 3.8% (19/506) of the placebo group had SVT as the diagnosis for admission (p=0.50). As a secondary diagnosis, the incidence of SVT was 4.7% (29/624) for the enalapril group compared with 3.2% (16/506) for the placebo group (p=0.2). Combining the above results, the total incidence of SVT was 6.9% for the enalapril group versus 6.7% for the placebo group (p=1.0).

	SVT		
Treatment	No	Yes	Total
Enalapril	581 (93.1%)	43 (6.9%)	624
Placebo	472 (93.3%)	34 (6.7%)	506
Total (N)	1053	77	1130

Conclusion: In a large population of patients with left ventricular dysfunction and congestive heart failure, treatment with enalapril did not significantly affect the incidence of SVT compared to placebo.

3:48 p.m.

1211MP-167 Supraventricular Arrhythmias in the U.S. Population: A Rapidly Accelerating Epidemic in the Elderly

D. Douglas Miller, Joseph S. Alpert, Saint Louis University, St. Louis, MO

Background: The 2002 ACC/AHA/ESC practice guidelines task force on supraventricular arrhythmias(SVA), excluding atrial fibrillation (A Fib), determined that incidence, prevalence and hospitalization data for SVA were incomplete or lacking.
Methods: A prospective review of 2 large U.S. hospital databases(1998 Medicare Provider Analysis & Review/MEDPAR and Health Care Financing Administration discharges), and the 1999 Department of Health & Human Services national discharge survey for ICD-9 CM codes 427.xx forms the basis for SVA hospitalization and discharge statistics in the table. Prevalence was based on the 1996 Centers for Disease Control Vital and Health Statistics current estimates from the National Health Interview Survey.
Results: SVA is an infrequent primary hospital diagnosis compared to A Fib, but it has comparable case fatality(=1% vs 1.7%), average length of stay(LOS=4.2 vs 4.7 days) and average Medicare reimbursement(=$3,802 vs $3,559). Overall prevalence for paroxysmal SVA &/or unspecified rapid heart action in the U.S. population was 4.3 million(8.7%). The SVA risk ratio(RR) for pts. aged >65 yrs. versus <45 yrs. was 8.2(male RR = 6.2; female RR =10.7).
Conclusion: The expert ACC/AHA/ESC committee on SVA concludes that paroxysmal SVA (excluding A Fib) is a relatively prevalent condition, currently affecting >30% of the elderly U.S population. The rapid aging of the U.S. population will likely contribute to increasing prevalence and medical costs for SVA in the coming decades.

Year	Hospital Population	% of Total Discharges	Case Fatality Rate	Average LOS (days)	% Aged >65 yrs
1998	Medicare	3.8%	1.0%	4.2	99%
1999	Non-Federal	1.1%	0.96%	3.6	58%