DILTIAZEM SUSTAINED RELEASE PLUS NITRATES VERSUS NITRATE THERAPY ALONE FOR THE TREATMENT OF STABLE ANGINA PECTORIS

Udoh Thadani, Richard Friedman, Thomas Giles, Kenneth Weir, William Grossman, C. L. Branch and the Dilatiazem Study Group, OU Health Sciences Center, Oklahoma City, OK

Despite widespread use of calcium channel blockers and long-acting nitrates, little information is available on the combined effects. One hundred twenty-nine patients, of whom 50% were men, were randomized to receive either dilatiazem sustained release (SR) 180 mg bid, nitrates plus dilatiazem SR, nitrates alone, or placebo. The treatment was continued up to 3 months. Hemodynamic and patient endpoints were assessed weekly. At the end of the study, the percentage of patients who had experienced a 20% or greater reduction in exercise requirements or angina severity was significantly greater in the dilatiazem SR group than in the other groups (p < 0.05). The results suggest that the combination of dilatiazem SR and nitrates is more effective in the treatment of stable angina than either drug alone.

Electrogram Characteristics of Successful Target Sites During Radiofrequency Catheter Ablation of Accessory Pathways

Hugh Calkins, Ioao Sousa, Shimon Rosenheck, Rafael El-Assal, William Kou, Michael de Butleir, Jonathan Langberg, Alan Kadiash, Fred Moravsky, University of Michigan Medical Center, Ann Arbor, Michigan, USA

Although ablation of accessory pathways (AP) with radiofrequency (RF) energy has been shown to be effective, the optimal mapping technique remains uncertain. We have used an abbreviated mapping protocol in which the ablation catheter (4 mm tip, 5 mm interelectrode spacing) is used for mapping as well as RF energy delivery. We report the electrogram characteristics of 50 successful target sites of RF energy delivery. Concealed APs (N = 17) were mapped during ventricular (V) pacing or orthodromic tachycardia. Manifest APs (N = 33) were mapped during sinus rhythm. Results: Electrograms from manifest APs demonstrated a retrograde AP potential in 23 of 33 patients. Local V activation occurred 2.1 ± 1.4 ms after the onset of the delta wave and the AP potential when present occurred 3.8 ± 1.6 ms. The local V to the AP latency was 1.6 ± 0.4 ms. During atrial pacing, AP potentials were noted 1.6 ± 0.3 ms after the onset of the QRS and the AP potential when present occurred 3.8 ± 1.6 ms. The local V to the AP latency was 2.1 ± 1.2 ms. The ratio of the AP potential to the QRS was 0.63 ± 0.21. Right-sided pathways were ablated from the atrial insertion where the mean AV ratio was 2.2 ± 0.3. Right-sided pathways were ablated from the atrium where the AV ratio was 2.8 ± 0.4. In conclusion, successful target sites for catheter ablation of APs often demonstrate an AP potential, but in at least 1/3 of pts, successful AP ablation can be achieved at sites of early A or V activation where no AP potential is seen.

11:00

RADIOFREQUENCY CATHETER ABLATION OF MAHAIM FIBERS AT THE LATERAL TRICUSPID ANULUS

Michael Prior, Karen Beckman, Kriagh Moulton, Andrew Hazlitt, Nicholas Twidale, Xunzhong Wang, James Calamo, Ralph Lazzara, Warren Jackman, University of Oklahoma and VAMC, Oklahoma City, OK

Surgical experience suggests the atrial insertion of Mahaim fibers is frequently located in the right free-wall (rather than the septum or AV node) and the distal insertion may occur almost anywhere within the right ventricle, including distal segments of the right bundle branch (BB). Catheter ablation of the right accessory pathway in 1 pt and slow AV nodal pathway in 1 pt. In both pts, Mahaim fibers had long antegrade conduction times (local AV > 225 msec) and no retrograde conduction. In 1 pt, earliest ventricular activation (30 msec before delta) was recorded at lateral TA. In the other pt, the ventricular insertion was far from the TA (in distal BB system), but shortest Stim-Delta during atrial pacing was recorded at the lateral TA. At that site, a potential was recorded 70 msec after the local atrial potential, possibly representing Mahaim fiber activation. Radiofrequency energy (35 watts for 45 sec) delivered beneath the TA at these 2 sites eliminated Mahaim fiber conduction in both pts.

CONCLUSIONS: In 2 pts, Mahaim fibers crossed the lateral TA from the septum and AV node. An ablation site along the TA can be identified, despite the absence of retrograde conduction.