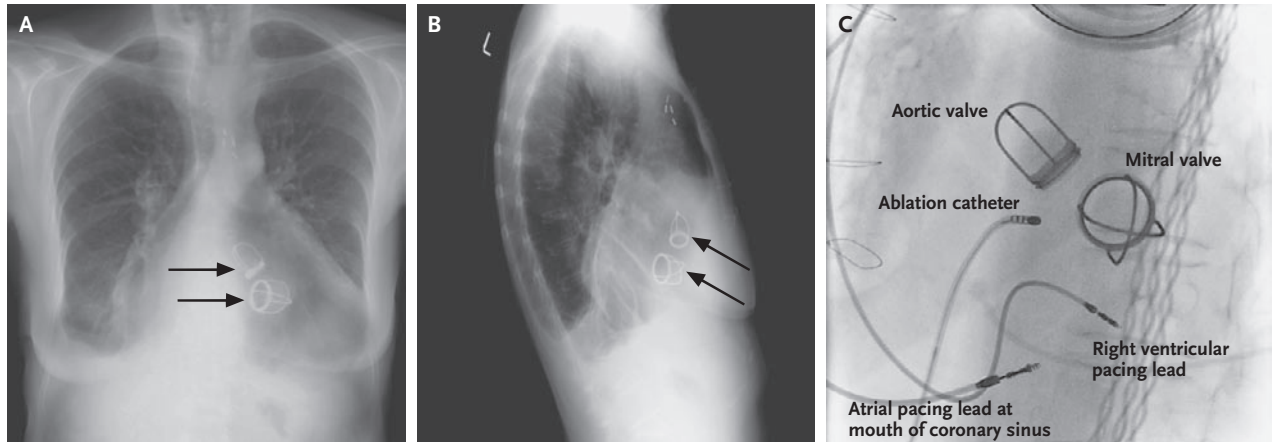


IMAGES IN CLINICAL MEDICINE

Mapping the Atrioventricular Node



Andrew E. Epstein, M.D.
James K. Kirklin, M.D.

University of Alabama at Birmingham
Birmingham, AL 35294
aepstein@uab.edu

A 75-YEAR-OLD WOMAN PRESENTED WITH DYSPNEA, AN AWARENESS OF rapid heart action, and permanent atrial fibrillation with a rapid ventricular response that had been resistant to treatment with beta-blockers, calcium-channel blockers, digoxin, and multiple cardioversions. For severe rheumatic aortic and mitral stenosis, she had undergone replacement of the aortic and mitral valves with Starr-Edwards devices in 1970, as seen on chest radiography on admission (Panels A and B, arrows). In 2006, a pacemaker had been implanted for the treatment of bradycardia.

To control the rapid ventricular response to atrial fibrillation, the patient underwent ablation of the atrioventricular node, located just below the aortic valve, where the ablation catheter was positioned (Panel C). Whereas ablation sites are often identified with the use of computerized systems for “electroanatomical mapping,” the patient’s atrioventricular node was identified on the basis of simple anatomical landmarks, the aortic and mitral valves. The atrioventricular node may be injured by operations or infections because of its proximity to these valves.

After ablation, the patient’s condition immediately improved. Atrioventricular-node blocking agents were discontinued, and the only cardiac medications she continued to receive were warfarin and furosemide. Six months after the procedure, the patient remained free of heart-failure symptoms.

Copyright © 2007 Massachusetts Medical Society.

WEB-ONLY IMAGES IN CLINICAL MEDICINE

Click on “Featured Images” at www.nejm.org to see the *Journal’s* Web-only Images in Clinical Medicine. The Images are listed (with e page numbers) in the table of contents of the printed *Journal* the week they are published and are compiled on the *Journal’s* Web site.