

CLINICAL HISTORY: ,This 78-year-old black woman has a history of hypertension, but no other cardiac problems. She noted complaints of fatigue, lightheadedness, and severe dyspnea on exertion. She was evaluated by her PCP on January 31st and her ECG showed sinus bradycardia with a rate of 37 beats per minute. She has had intermittent severe sinus bradycardia alternating with a normal sinus rhythm, consistent with sinoatrial exit block, and she is on no medications known to cause bradycardia. An echocardiogram showed an ejection fraction of 70% without significant valvular heart disease.,PROCEDURE: , Implantation of a dual chamber permanent pacemaker.,APPROACH: , Left cephalic vein.,LEADS IMPLANTED: ,Medtronic model 12345 in the right atrium, serial number 12345. Medtronic 12345 in the right ventricle, serial number 12345.,DEVICE IMPLANTED: ,Medtronic EnRhythm model 12345, serial number 12345.,LEAD PERFORMANCE: ,Atrial threshold less than 1.3 volts at 0.5 milliseconds. P wave 3.3 millivolts. Impedance 572 ohms. Right ventricle threshold 0.9 volts at 0.5 milliseconds. R wave 10.3. Impedance 855.,ESTIMATED BLOOD LOSS: , 20 mL.,COMPLICATIONS: , None.,DESCRIPTION OF PROCEDURE: ,The patient was brought to the electrophysiology laboratory in a fasting state and intravenous sedation was provided as needed with Versed and fentanyl. The left neck and chest were prepped and draped in the usual manner and the skin and subcutaneous tissues below the left clavicle were infiltrated with 1% lidocaine for local anesthesia. A 2-1/2-inch incision

was made below the left clavicle and electrocautery was used for hemostasis. Dissection was carried out to the level of the pectoralis fascia and extended caudally to create a pocket for the pulse generator. The deltopectoral groove was explored and a medium-sized cephalic vein was identified. The distal end of the vein was ligated and a venotomy was performed. Two guide wires were advanced to the superior vena cava and peel-away introducer sheaths were used to insert the two pacing leads. The venous pressures were elevated and there was a fair amount of back-bleeding from the vein, so a 3-0 Monocryl figure-of-eight stitch was placed around the tissue surrounding the vein for hemostasis. The right ventricular lead was placed in the high RV septum and the right atrial lead was placed in the right atrial appendage. The leads were tested with a pacing systems analyzer and the results are noted above. The leads were then anchored in place with #0-silk around their suture sleeve and connected to the pulse generator. The pacemaker was noted to function appropriately. The pocket was then irrigated with antibiotic solution and the pacemaker system was placed in the pocket. The incision was closed with two layers of 3-0 Monocryl and a subcuticular closure of 4-0 Monocryl. The incision was dressed with Steri-Strips and a sterile bandage and the patient was returned to her room in good condition.,IMPRESSION: ,Successful implantation of a dual chamber permanent pacemaker via the left cephalic vein. The patient will be observed overnight and will go home in the morning.