PREPROCEDURE DIAGNOSIS: , Complete heart block.,POSTPROCEDURE DIAGNOSIS: ,Complete heart block.,PROCEDURES PLANNED AND PERFORMED,1. Implantation of a dual-chamber pacemaker.,2. Fluoroscopic guidance for implantation of a dual-chamber pacemaker.,FLUOROSCOPY TIME: , 2.6 minutes.,MEDICATIONS AT THE TIME OF STUDY,1. Versed 2.5 mg.,2. Fentanyl 150 mcg.,3. Benadryl 50 mg.,CLINICAL HISTORY: , the patient is a pleasant 80-year-old female who presented to the hospital with complete heart block. She has been referred for a pacemaker implantation.,RISKS AND BENEFITS: , Risks, benefits, and alternatives to implantation of a dual-chamber pacemaker were discussed with the patient. The patient agreed both verbally and via written consent.,DESCRIPTION OF PROCEDURE: , The patient was transported to the cardiac catheterization laboratory in the fasting state. The region of the left deltopectoral groove was prepped and draped in the usual sterile manner. Lidocaine 1% (20 mL) was administered to the area. After achieving appropriate anesthesia, percutaneous access of the left axillary vein was then performed under fluoroscopy. A guide wire was advanced into the vein. Following this, a 4-inch long transverse incision was made through the skin and subcutaneous tissue exposing the pectoral fascia and muscle beneath. Hemostasis was achieved with electrocautery. Lidocaine 1% (10 mL) was then administered to the medial aspect of the incision. A pocket was then fashioned in the medial direction. Using the previously placed wire, a 7-French

side-arm sheath was advanced over the wire into the left axillary vein. The dilator was then removed over the wire. A second wire was then advanced into the sheath into the left axillary vein. The sheath was then removed over the top of the two wires. One wire was then pinned to the drape. Using the remaining wire, a 7 French side-arm sheath was advanced back into the left axillary vein. The dilator and wire were removed. A passive pacing lead was then advanced down into the right atrium. The peel-away sheath was removed. The lead was then passed across the tricuspid valve and positioned in the apical location. Adequate pacing and sensing functions were established. Suture sleeve was advanced to the entry point of the tissue and connected securely to the tissue. With the remaining wire, a 7-French side-arm sheath was advanced over the wire into the axillary vein. The wire and dilating sheaths were removed. An active pacing lead was then advanced down into the right atrium. The peel-away sheath was removed. Preformed J stylet was then advanced into the lead. The lead was positioned in the appendage location. Lead body was then turned, and the active fix screw was fixed to the tissue. Adequate pacing and sensing function were established. Suture sleeve was advanced to the entry point of the tissue and connected securely to the tissue. The pocket was then washed with antibiotic-impregnated saline. Pulse generator was obtained and connected securely to the leads. The leads were then carefully wrapped behind the pulse generator, and the entire system was placed in the pocket. The pocket was then closed

with 2-0, 3-0, and 4-0 Vicryl using a running mattress stitch. Sponge and needle counts were correct at the end of the procedure. No acute complications were noted.,DEVICE DATA,1. Pulse generator, manufacturer Boston Scientific, model # 12345, serial #1234.,2. Right atrial lead, manufacturer Guidant, model #12345, serial #1234.,3. Right ventricular lead, manufacturer Guidant, model #12345, serial #1234.,MEASURED INTRAOPERATIVE DATA,1. Right atrial lead impedance 534 ohms. P waves measured at 1.2 millivolts. Pacing threshold 1.0 volt at 0.5 milliseconds.,2. Right ventricular lead impedance 900 ohms. R-waves measured 6.0 millivolts. Pacing threshold 1.0 volt at 0.5 milliseconds.,DEVICE SETTINGS: , DDD 60 to 130.,CONCLUSIONS,1. Successful implantation of a dual-chamber pacemaker with adequate pacing and sensing function.,2. No acute complications.,PLAN,1. The patient will be taken back to her room for continued observation. She can be dismissed in 24 hours provided no acute complications at the discretion of the primary service.,2. Chest x-ray to rule out pneumothorax and verified lead position.,3. Completion of the course of antibiotics.,4. Home dismissal instructions provided in written format.,5. Device interrogation in the morning.,6. Wound check in 7 to 10 days.,7. Enrollment in device clinic.