



Operative Report – Circulatory System

PROCEDURE: Implantation of a CRT-P biventricular pacemaker with AV node ablation.

INDICATION FOR STUDY: The patient is a female with paroxysmal atrial fibrillation with rapid ventricular response and congestive heart failure. She was a candidate for implantation of a CRT-P biventricular pacemaker with AV node ablation.

PROCEDURE: Using intravenous midazolam and fentanyl for sedation, and 1% lidocaine for local anesthesia, the left subclavian vein was percutaneously cannulated. A pacemaker pocket was fashioned in the left infraclavicular area. A bipolar screw-in lead was inserted and advanced to the right ventricular apex. A bipolar left ventricular pacing lead was inserted through a guiding sheath in the coronary sinus to the middle cardiac vein. A venogram of the coronary sinus had been performed utilizing 9 cc of low osmolar contrast. After appropriate pacing and sensing thresholds were obtained, the leads were attached to a multiprogrammable pulse generator which was placed into the pocket. D-stat was utilized in the pocket. The subcutaneous tissue was closed with 2-0 Vicryl, subcuticular tissue with 3-0 Vicryl, and the skin edges were approximated with Indermil. There were no complications. The total fluoroscopy time for the device implant was 28.3 minutes.

At this point, the right femoral vein was cannulated. A G5 ablation catheter was inserted and advanced to the area of the compact AV node. Radiofrequency energy was applied and complete heart block occurred. The electrode catheter was withdrawn under low osmolar fluoroscopy. A 15 minute waiting period was allowed to pass and there was no further evidence of AV conduction. The pacing and sensing thresholds were reaccessed and found to be unchanged. The electrode catheter was withdrawn under fluoroscopic guidance and external pressure applied to assure hemostasis. The patient was returned in stable condition. Total fluoroscopy time for the ablation was 0.8 minutes.

RESULTS:

1. THRESHOLD DATA

RIGHT VENTRICLE: R waves measured 17 mV, and the pacing threshold was 0.6 V at 0.4 ms, current 0.9 mA, impedance 709 ohms, slew rate >4 V/second. There was no diaphragmatic stimulation with pacing at 10 V.

LEFT VENTRICLE: R waves measured 10 mV, and the pacing threshold was 0.7 V at 0.4 ms, current 0.8 mA, impedance 907 ohms, slew rate 1.4 V/sec. There was no diaphragmatic stimulation with pacing at 10 V.

2. TECHNICAL DATA

The right ventricular lead is a Guidant Dextrus, model #4137, serial #29284763. The left ventricular lead is a Medtronic Attainability, model #4 I96-88, serial #PVI73734SV. The device is a Boston Scientific Invive, model #VI73, serial #103S94.

3. PROGRAMMED PARAMETERS AT TIME OF IMPLANT

Mode VVIR, lower rate 75, upper tracking rate 120, right ventricle autocapture at 0.4 ms, left ventricle 3.5 V at 0.4 ms. Right and left ventricular pacing and sensing configuration bipolar.

4. ABLATION PROCEDURE

The basic intervals in atrial fibrillation showed an average R-R interval over 600 ms. The H-V interval was 46. There was no escape rate seen after ablation with pacing at 30 beats per minute.

ICD-10-CM code(s):

I48.0 – Paroxysmal atrial fibrillation

I50.9 – Congestive heart failure, unspecified

ICD-10-PCS code(s):

0JH607Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest, Subcutaneous Tissue and Fascia, Open Approach

02H43JZ Insertion of Pacemaker Lead, Coronary Vein, Percutaneous Approach

02HK3JZ Insertion of Pacemaker Lead, Right Ventricle, Percutaneous Approach

02583ZZ Destruction of Conduction Mechanism, Percutaneous Approach

Rationale:

PAF is defined as at least two separate episodes of AF that terminate spontaneously in less than 7 days, usually within 24 hours. These episodes of AF last greater than 30 seconds and are not related to a reversible cause.

D stat is a bandage used to control surface bleeding.

Per the ICD-10-PCS Body Part Key, the atrioventricular node is considered the body part -conduction mechanism. The conduction mechanism is the pathway for the electrical impulses throughout the heart that govern cardiac rhythm, whereas the right atrium is one of four muscular chambers of the heart. Although operative reports may state the right atrium was ablated it is the conduction mechanism The ablation procedure is directed at the pathway for electrical impulses rather the muscular wall of the heart itself. The atrium is not being destroyed. < AHA, Coding Clinic, Q3, 2016>

It is important to remember that an AV node ablation will not convert atrial fibrillation to sinus rhythm; it will only control the number of impulses reaching the ventricles. Many times ablation will be accompanied by insertion of a pacemaker to keep the heart rate at a normal pace.

The AV node is located in the right side of the heart.

It is unclear whether the fluoroscopic guidance would be reported with a PCS code or would be captured through chargemaster. If captured with a PCS code, report the following:

[B51V1ZA Fluoroscopy of Coronary Sinus (other vein), low osmolar for guidance]

[B2141ZZ Fluoroscopy, right heart, low osmolar, ND, NQ]