Persistent left superior vena cava

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A 76-year-old man with coronary artery disease and a history of aortocoronary bypass surgery seven years previously presented with symptomatic bradycardia and atrial fibrillation. After evaluation of the coronary status by cardiac catheterization, the decision was made to implant a ventricular rate responsive demand (VVIR) pacemaker. Positioning of the ventricular lead via the left subclavian vein was associated with problems while pushing the lead forward. Radiographic imaging with contrast media revealed the presence of a persistent left superior vena cava (PLSVC), with the pacemaker lead following the path of the additional vein. Using fluoroscopy, positioning of the pacemaker lead was completed without further problems. The chest x-ray performed after the procedure showed the left-sided path of the pacemaker's lead (Figure 1), indicating the presence and path of the abnormal vein. PLSCV is the most common thoracic vein anomaly, occurring in approximately 0.5% of the normal population. It is often associated with a missing right superior vena cava or other cardiac anomalies (1), and can be detected by various methods, including echocardiography and magnetic resonance tomography (2). However, in the majority of cases, PLSCV is an incidental finding during diagnostic and therapeutic procedures (3,4). Therefore, physicians should be aware of this anomaly and the associated technical problems in this setting.

Figure 1 Chest x-ray following ventricular rate responsive demand (VVIR) pacemaker implantation, showing a left-sided path of the lead (arrow)

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Received for publication October 15, 2007. Accepted November 10, 2007