Persistent Left Superior Vena Cava, a Challenge for Pacemaker Implantation: One Case Report

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Clinical Image Description

A: venography showing the Persistence of left superior vena cava.

B: chest CT showing the Persistence of left superior vena cava.

C: Chest radiography of the ventricular pacemaker lead.

D: Paced rhythm and stimulation thresholds.

Persistent left superior vena cava is a rare congenital malformation, usually without clinical impact, due to the persistence of the anterior cardinal vein. It is detected in approximately 3% of autopsies and in 2% to 4% of patients with congenital heart disease. We report the case of a 75-year-old patient, hypertensive on bitherapy and type 2 diabetic well balanced on insulin, followed for hypertensive cardiopathy complicated with atrial fibrillation on anti-vitamin K and digitalis. He was admitted for lipothymic discomfort and exertional dyspnea dating back one month. The clinical examination on admission was unremarkable. The electrocardiogram showed a slow and regular atrial fi-
brillation rhythm with a ventricular rate of 34 cycles per minute, which is indicative of high-grade atrioventricular block requiring implantation of a pacemaker. The patient was admitted to the rhythmology room for right-sided pacemaker placement. After dissection of the right cephalic vein, a guidewire was introduced into the right subclavian vein and then passed to the left via a confluence to join the left superior vena cava, instead of descending via the right superior vena cava, which was atresic in our patient. Because of this long trajectory, the ventricular lead did not reach the right ventricle, imposing a recovery of the patient on the left side with successful implantation of a single-chamber pacemaker. The radiological and electrical control after implantation was satisfactory.