Silent Obstruction of SVC with Collateral Circulation after Cardioverter Defibrillator Implantation

Koichiro Ejima, Morio Shoda, Daigo Yagishita, Bun Yashiro, Takahiro Sato, Tetsuyuki Manaka and Nobuhisa Hagiwara

Key words: superior vena cava, azygous vein, SVC syndrome, implantable cardioverter defibrillator, complications

(A Inter Med 49: 801-802, 2010)
(DOI: 10.2169/internalmedicine.49.3385)

A 47-year-old woman with dilated cardiomyopathy underwent a single-chamber implantable cardioverter defibrillator (ICD) implantation for sustained ventricular tachycardia 10 years previously. Because bradycardia became clinically evident with beta-blocker therapy for heart failure, we attempted an upgrade from a single-chamber to dual-chamber ICD for physiological pacing. Venography revealed complete obstruction of the superior vena cava (SVC) with a collateral route through a huge azygous vein (Pictures A, B, C). SVC syndrome caused by pacemaker leads is only occasionally seen and its incidence has been estimated to be less than 1 in 1,000 pacemaker patients. The azygous vein is fre-
quently dilated in the presence of SVC obstruction as a compensatory means of draining venous blood from the upper body into the inferior vena cava and right atrium. Sufficient collateral circulation freed her from any symptoms of SVC syndrome. A surgical upgrade was scheduled in place of a transvenous upgrade.

Disclosure: There is no financial support and no relationships with industry.