A 69-year-old male was admitted because of dysfunction of his DDDR pacemaker. Six years ago he received the device because of symptomatic 2° atrioventricular block. The chest X-ray revealed a fracture of the atrial lead just below the clavicle (Figure 1).\(^1\)

Before the lead replacement, cineangiography of the left subclavian vein was performed to visualize any venous obstruction.\(^2\) Normal diameter and flow were observed (Figure 2).

However, no passage of the new atrial lead through the subclavian vein at the site of the junction with the innominate vein was possible. In addition, more proximal venography showed a total occlusion of the innominate vein with extensive collateral flow through the jugular veins (Figure 3).

At this point, the procedure was terminated. The old pacemaker was removed and both old atrial and ventricular leads were insulated, while a new pacemaker and leads were implanted on the contralateral side. No further complications occurred, and the patient was discharged on the next day.
Venous thrombosis and stenosis at the implantation site are common complications after pacemaker placement, with the incidence varying between 30 and 45% (Figure 4). Therefore, in pacemaker lead replacement procedures, evaluation of the patency of the subclavian and innominate veins by venography is recommended. Furthermore, in this manner, the optimal site of puncture can be assessed and possible damage to the already implanted leads could be avoided. However, although uncommon, physicians should be aware of a more proximal occlusion of the subclavian and innominate veins while replacing pacemaker leads, even in cases with seemingly normal venography.

References