

Retained Guidewire from the Central Venous Catheter: A Clinical Image

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A 64-year-old man with hypertension since 1980, coronary artery disease and peripheral arterial disease since 1990, congestive heart failure with an ejection fraction of 30 percent, severe mitral regurgitation, and atrial fibrillation (AFib) since 2010, underwent a right common femoral artery endarterectomy with patch angioplasty and femoral to posterior tibial artery bypass. This procedure lasted 8 hours and was complicated by graft thrombosis. The immediate postoperative course was significant for atrial fibrillation with rapid ventricular rate of greater than 150 beats per minute and hypotension (blood pressure 60/40 mmHg), requiring electrical cardioversion and initiation of norepinephrine. The patient was transferred to the intensive care unit (ICU) for continued care where he underwent central venous catheter placement via right internal jugular vein as part of resuscitative efforts. Postprocedure confirmatory chest radiograph revealed an inadvertently retained guidewire extending from the internal jugular, to the superior vena cava and into the right side of the

heart. The abnormality was identified on imaging and interventional radiologist removed the retained device via a femoral vein approach. From the central catheter placement to guidewire removal there were no recorded arrhythmias on ECG monitor and a subsequent echocardiogram did not reveal evidence of new valvular or wall motion dysfunction.

Although uncommon, guidewire retention during central venous catheterization is not unheard of. In New York State, between 2008 and 2009, there were 80 reported cases of retained catheters and guidewires, making them the most commonly reported nonsurgically retained objects [1]. Complications are varied and range from extremity edema due to venous obstruction, to pain and externalization of the foreign body [2-5].

This case serves to raise awareness for invasive procedure protocol in terms of accountability for all utilized equipment, even in bedside procedures, as well as a systematic analysis of routine radiographs, accounting for all man-made objects.

Figure 1: Chest radiograph showing retained guidewire from a central venous catheter extending from the right jugular vein to the right ventricle

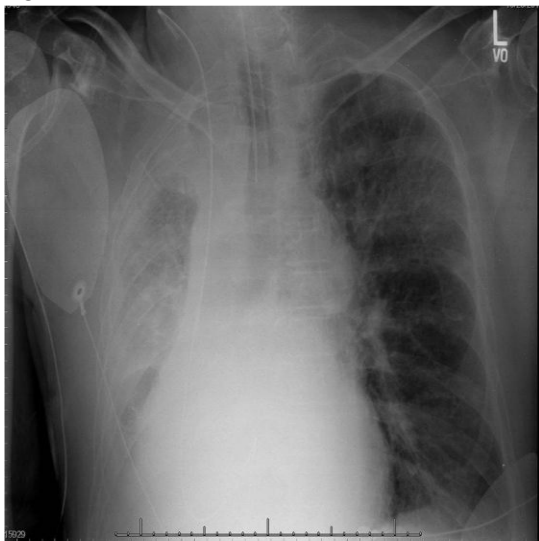
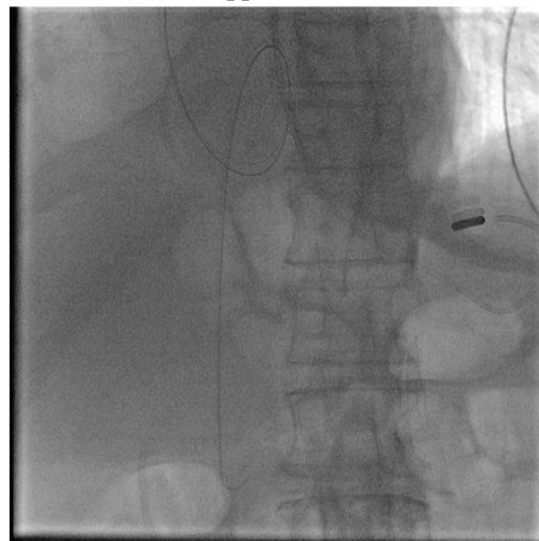


Figure 2: Image from interventional radiology showing guidewire tip in the inferior vena cava prior to being retrieved via femoral vein approach.



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