

Unusual occurrence during Temporary Hemodialysis Line insertion

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Unusual Occurrence during Temporary Hemodialysis Line insertion

A 45 years old lady with no history of hypertension or diabetes presented to us for evaluation of advanced renal failure. She had previously undergone left ureteric Double J stenting in 2016 for left ureteric calculus during which time her serum creatinine was found to be 2.3mg/dl. She was subsequently lost to follow-up and presented six years later in May 2022. At admission, her Hb was low at 5.6gm/dl, Blood urea was 126mg/dl and serum creatinine at 10.6mg/dl with normal serum electrolytes. Ultrasound abdomen revealed bilateral renal calculi with right sided hydronephrosis and left sided fragmented, forgotten stent that has been in place for 6 years. She underwent placement of right internal jugular vein double lumen temporary hemodialysis catheter; however, the medical resident performing the procedure inadvertently forgot to remove the guidewire. A check chest Xray (figure below) shows migration of guidewire tip into the lumen of the IVC well below the level of the

diaphragm. This though extremely rare has been shown in upto 1/3rd of patients undergoing central venous catheterization (CVC). In a retrospective study by Riechmann-Ariel et al [1] looking at CVC cannulation using the Seldinger's technique from 2014-2020, including 166 patients, it was reported that 33.71% of guidewires had migrated to the IVC. Rates of catheter migration were similar in the internal jugular vs subclavian site. Most commonly reported guidewire related complications include cardiac arrhythmias, perforation of vessels, [2,3] or cardiac chambers, subsequent embolization, entanglement with other intravascular devices and rarely complete loss of the guidewire within the vascular system [4]. The guidewire was subsequently removed successfully with no other complications to the patient and she underwent hemodialysis and removal of left fragmented ureteric stent uneventfully. She however did not recover kidney function and continues to be dialysis dependent.

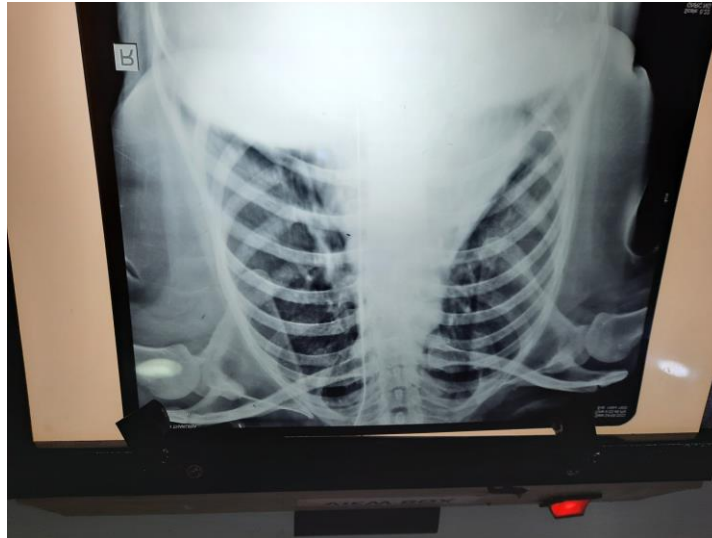


Figure: Migration of the guidewire to the IVC during right internal jugular vein temporary HD line insertion

It is important to note that migration of guidewire has to be kept in mind during central vein catheterization.

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