Malfunctioning tunneled dialysis catheter associated with arrhythmias

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Clinical image description

Tunneled Dialysis Catheters (TDC) remain a common modality of vascular access and often malfunction because of a myriad of reasons including thrombosis and fibrin sheath formation. A common practice is to use thrombolysis for TDC malfunction with decreased blood flow. While this approach could work, it is prudent to obtain imaging of the TDC (cathetergram) to confirm its position and integrity. Here we show radiographic images of a right internal jugular TDC appropriately placed with the tip in the right atrium (Figure 1). Within two weeks, the patient developed poor blood flows on dialysis associated with intermittent arrhythmias. A Computed Tomography (CT) scan, done earlier that day to rule out pulmonary embolus, showed that the TDC had migrated medially (in wards) with the tip now positioned within the right ventricle (Figure 2). The TDC was exchanged, which resulted in the resolution of arrhythmias and excellent blood flow.

Figure 1: TDC at the time of insertion with the tip appropriately located in the right atrium.
Figure 2: CT-scan imaging showing the TDC after it migrated medially with the tip in the right ventricle.
blood flow on dialysis. While medial migration of TDCs is rare, this case illustrates its possibility and the importance of imaging in evaluating TDC related complications. Failure to identify the cause of malfunction in this case not only would not have improved the blood flow, but moreover, could have resulted in serious complications such as arrhythmias, right ventricular rupture, or sudden cardiac death. Choosing proper length of TDC and location of exit site at the time of insertion is also important to prevent accidental migration into the right ventricle.

Declarations

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