Central Venous Catheter Tip Migration by Power Contrast Media Injection  
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Background

CT-injectable Central Venous Catheters (CVCs) are approved by the U.S. Food and Drug Administration (FDA) for power injection of CT contrast material. Since approved, the use of power CVCs have become an increasingly popular choice for vascular access. However, during the CT procedure there is a dramatic change in pressure causing the catheter to undergo a “whipping phenomenon”. This can cause the catheter tip to migrate.

Case Description

A 68 year old male patient scheduled for chest CT with contrast had his right jugular power port assessed showing scant blood return. However, 2 hours post Alteplase injection the port had no blood return. A second dose of Alteplase was instilled and good blood return was finally obtained after one hour. The patient’s chest CT report revealed the port was malpositioned. The patient was then sent to Interventional radiology for repositioning.

Purpose

Proper CVC tip position is located between from the lower third of the superior vena cava (SVC) to the junction of the SVC and the right atrium. When the catheter tip is not in this region it is considered malpositioned. This poster explores the issue of CVC tip migration caused by CT power injection of contrast media and provides educational strategies to implement safer use of CVCs.

Results

CVC tip migration caused by CT power injection of contrast media can delay a patient’s treatment. This may cause potential problems and increase complications and expenses for the patients.

X-Rays

Normal Malposition after CT

Normal Malposition after CT Normal after IR

References