

Catheter-associated thrombus extracted with central line exchange

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Background

A 64 yo F with a history of hypertension, HFrEF, severe aortic stenosis, anemia, JAK2 mediated essential thrombocythemia presented for a progressively growing abdominal mass found to be large Grade 2 dedifferentiated liposarcoma involving the left ovary, left retroperitoneum, and compressing the left kidney and ureter causing hydronephrosis. Treatment with chemotherapy including doxorubicin was unsuccessful in attenuating growth of tumor and poorly tolerated. Scheduled for surgical excision/debulking.

Preoperative TTE

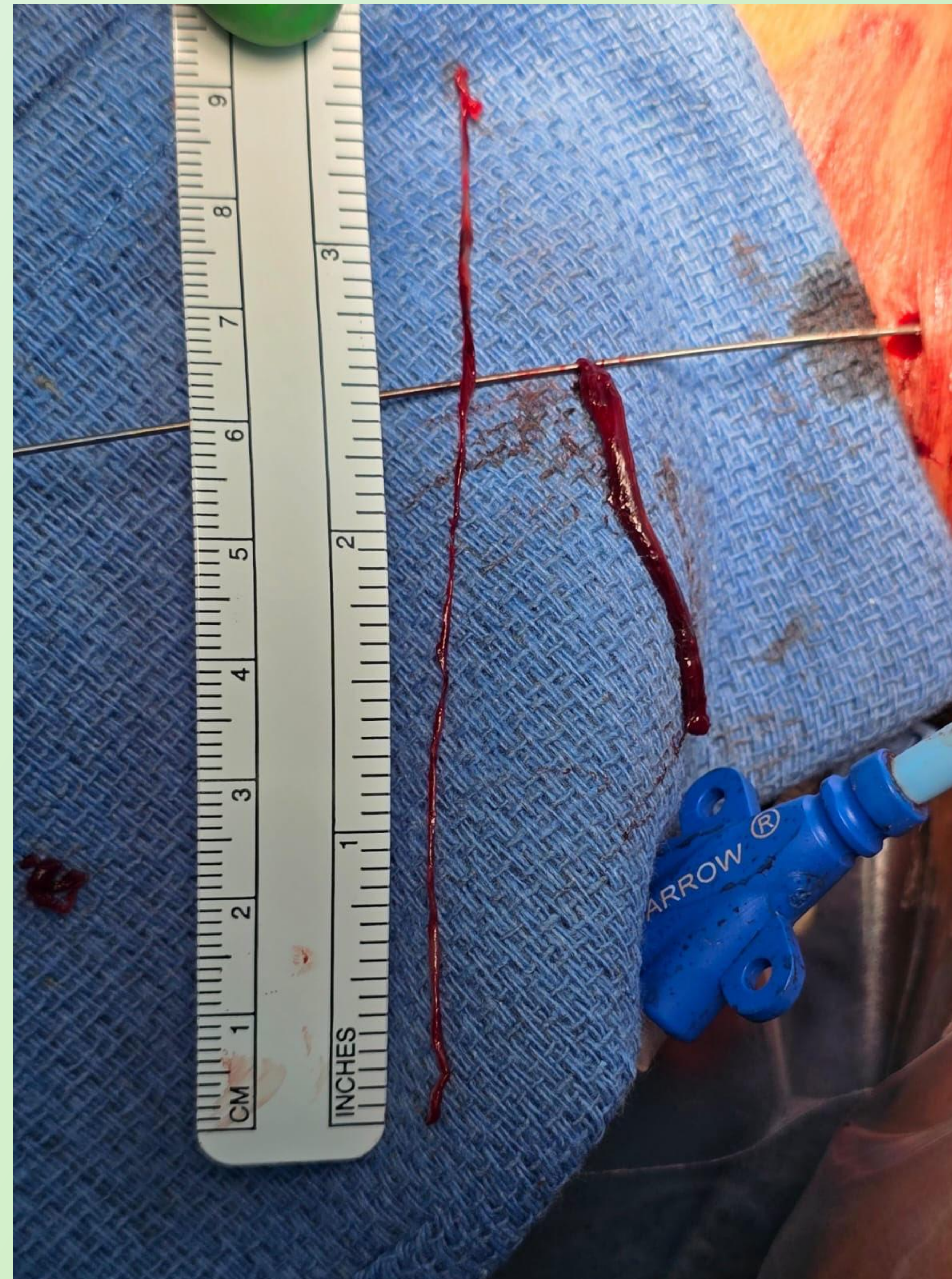
1 month prior to surgery LV systolic function was moderately reduced with an EF 30-35%, RV systolic function was normal. Severe AS and mild TR was observed.

Anesthetic plan:

In addition to standard ASA monitors, a pre-induction arterial line was placed, intra-operative TEE was performed, and a 9 French double lumen RIJ central line was placed. Standard induction was uneventful

Day of surgery hemoglobin was 6.4 g/dl. 4 units pRBCs were transfused prior to incision

TEG was performed prior to surgery start which demonstrated an R time of 10.2, alpha angle of 64.5, and MA of 80.2



Intraoperative echo:

Demonstrated large RA thrombus apparently adhered to tip of PICC Line in addition to LV hypokinesis and severe AS

Alteplase 2mg was given IV through PICC to lyse clot without success. Upon discussion with surgical oncology, the decision was made to abort the procedure, treat for intracardiac thrombus, and exchange the large 9 French introducer for a smaller 7 French triple lumen central line.

Catheter exchange

Upon removal of the introducer over a wire, a large clot was extracted, including both a thin fibrous sheath and an acute clot. The PICC line was removed and TEE demonstrated no further evidence of thrombus. After discussion with surgery, the decision was made to proceed with the case.

Discussion:

Catheter associated thrombus is a recognized complication of central lines, frequently described in temporary dialysis catheters for patients in renal failure, or PICC lines placed for patients receiving chemotherapy. Mechanical extraction has been described with devices such as Angiovac, Angiojet, or Flowtriever

While the goal of catheter exchange was not initiated to extract the clot, it was a welcome turn of events. Continued communication and shared decision facilitated excision of a rapidly growing tumor and avoided exposing this patient to a second anesthetic.