Severe IVC Thrombosis Presenting as Abdominal Pain in Antiphospholipid Syndrome

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Background

- Antiphospholipid syndrome is an autoimmune disorder associated with thrombotic events
- Women are at increased risk for fetal loss and recurrent miscarriages
- Revised Sapporo Criteria is used for diagnosis
  1. Vascular thrombosis or adverse pregnancy outcome; and
  2. At least one antiphospholipid antibody on two occasions 12 weeks apart

Case Presentation

- A 34-year-old woman (G5P0141) with antiphospholipid syndrome presented with sudden onset severe abdominal pain
- Pain started while she was bent down in the shower and radiated to back and lower extremities
- It resolved after she received intravenous (IV) morphine
- She was diagnosed with antiphospholipid syndrome >10 years prior after recurrent miscarriages
- The patient was on Aspirin 81mg for several years following her diagnosis, but stopped taking it one month prior
- On arrival, vital signs and physical exam were within normal limits

Pertinent Physical Exam:

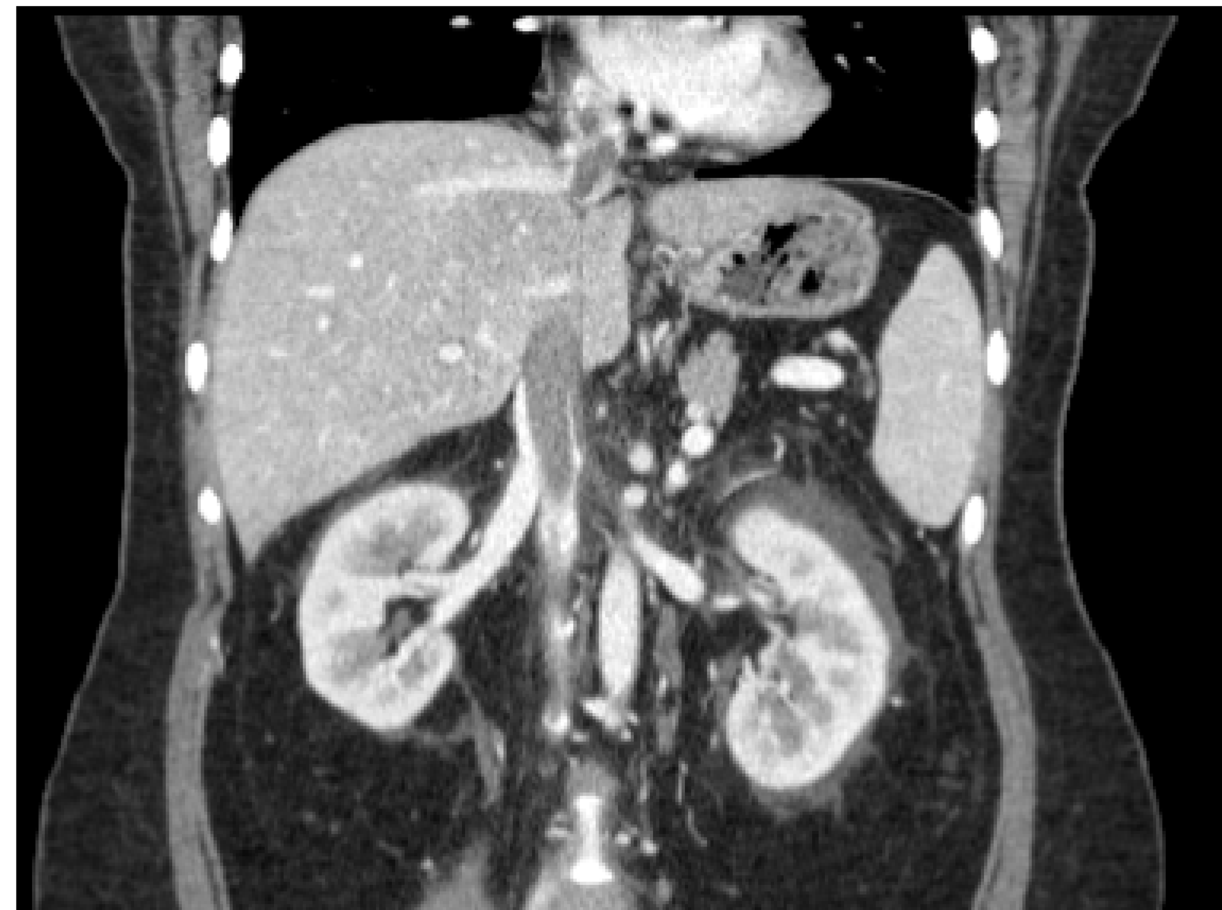
- **Vitals:** Temperature 36.7C, HR 91, BP 137/88; RR 17; SpO_2 100%
- **General:** Alert, awake, no acute distress
- **Abdomen:** Soft. Non-tender. Non-distended. (Patient was examined after receiving IV morphine)
- **Extremities:** No calf tenderness. No edema.

Pertinent Labs:

- **D-Dimer** 14,272 ng/mL FEU [normal range: 0-500 ng/mL FEU]
- **Hemoglobin** 14.0 g/dL [normal range: 12.0-16.0 g/dL]
- **Platelet count** $72x10^3$ μL [normal range: 130-400x10^3 μL]

Diagnostic Studies

Computed Tomography (CT) Abdomen with IV Contrast:



Extensive thrombus in the inferior vena cava (IVC) which extended into the right atrium of the heart and reached the hepatic veins. The thrombus did not extend into the renal veins, but there was near occlusion of the IVC at the level of the renal veins.

Lower Extremity Venous Duplex: Negative for deep vein thrombosis

Transthoracic Echocardiogram (TTE): Normal systolic function (ejection fraction: 55-60%); normal wall motion; grade 1 diastolic dysfunction

Hospital Course

- Interventional radiology emergently performed a mechanical thrombectomy of the IVC
- Started on warfarin while bridging with heparin until she reached a goal international normalized ratio (INR) of 2-3
- Discharged on warfarin 3mg daily and was advised that she needs pre-conception counseling if planning to become pregnant in the future

Discussion

The patient had an unprovoked thrombotic event. As a result, she was started on unfractionated heparin, followed by warfarin for a goal INR of 2-3. The recommendations for thrombus prevention are below.

Primary Thrombus Prevention

- May include usage of low-dose aspirin
- Controversial given mixed data in the literature
- Risk of thrombosis <1% per year in patients with antiphospholipid antibodies, but as high as 5% if they have other risk factors

Secondary Venous Thrombus Prevention

- Lifelong anticoagulation following an unprovoked thrombus
- Warfarin is recommended with goal INR 2-3
- Higher INR goals do not reduce the risk of recurrent events
- Treated with low molecular weight heparin (LMWH) during pregnancy
- Direct oral anticoagulants (DOACs) are inferior to warfarin

Secondary Arterial Thrombus Prevention

- No consensus: Warfarin (INR 2-3) alone *versus* warfarin with aspirin *versus* high-intensity warfarin (INR 3-4)

Conclusion

- Consider a thrombotic event if a patient with antiphospholipid syndrome presents with abdominal pain
- Warfarin is part of the first-line treatment for secondary thrombus prevention

References

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