

Ovarian vein thrombosis following asymptomatic COVID-19 in puerperium - Mimicking malignancy

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Introduction

Incidence of Ovarian vein thrombosis (OVT) in pregnancy is rare. Documented as 0.05% following vaginal delivery and 1-2% after caesarean delivery¹. Commonly the right ovarian vein is affected (70-90%), due to its longer course compared to its counterpart and absence of competent valves².

Patients with OVT usually present with Right iliac fossa (RIF) pain (55%) fever (85%), pelvic mass, and other nonspecific symptoms such as malaise, nausea, and vomiting.

In addition to respiratory symptoms, SARS-COV2 virus causes direct and indirect endothelial injury which leads to COVID-19 associated coagulopathy³.

With the pandemic of COVID-19, the reported thrombotic events in pregnancy have significantly increased than the previous non-COVID years irrespective of the COVID-19 disease status among pregnant women⁴

Case

A 31-year-old, mother of 3 children was referred to the National Cancer Institute on post partum day 68 for further investigations and management of suspected ovarian malignancy. She was admitted at the 4th week of her postpartum period following an uncomplicated vaginal birth. She complained of RIF pain for one week, dysuria and frequency without fever. She had undergone appendicectomy 9 years ago.

She was averagely built with a BMI of 23kg/m² and cardiovascular and respiratory system examinations were normal. The abdomen was tender more towards the RIF and no masses were felt. Shifting dullness was noted. Speculum and vaginal examination findings were normal.

Her SARS COV-2 RNA PCR was positive, with a CT value of 20. It was negative at her previous admission for childbirth. Her white cell count was 7700/μl, CRP 52 mg/L, suggestive of ongoing infection or inflammation. UFR was positive and urine culture yielded Coliform growth. Renal functions, liver functions, and coagulation parameters were within the normal range. Cancer antigen 125 (CA 125) level was elevated (523 U/ml). While LDH, AFP, CA 19-9, and beta HCG levels were within the normal range.

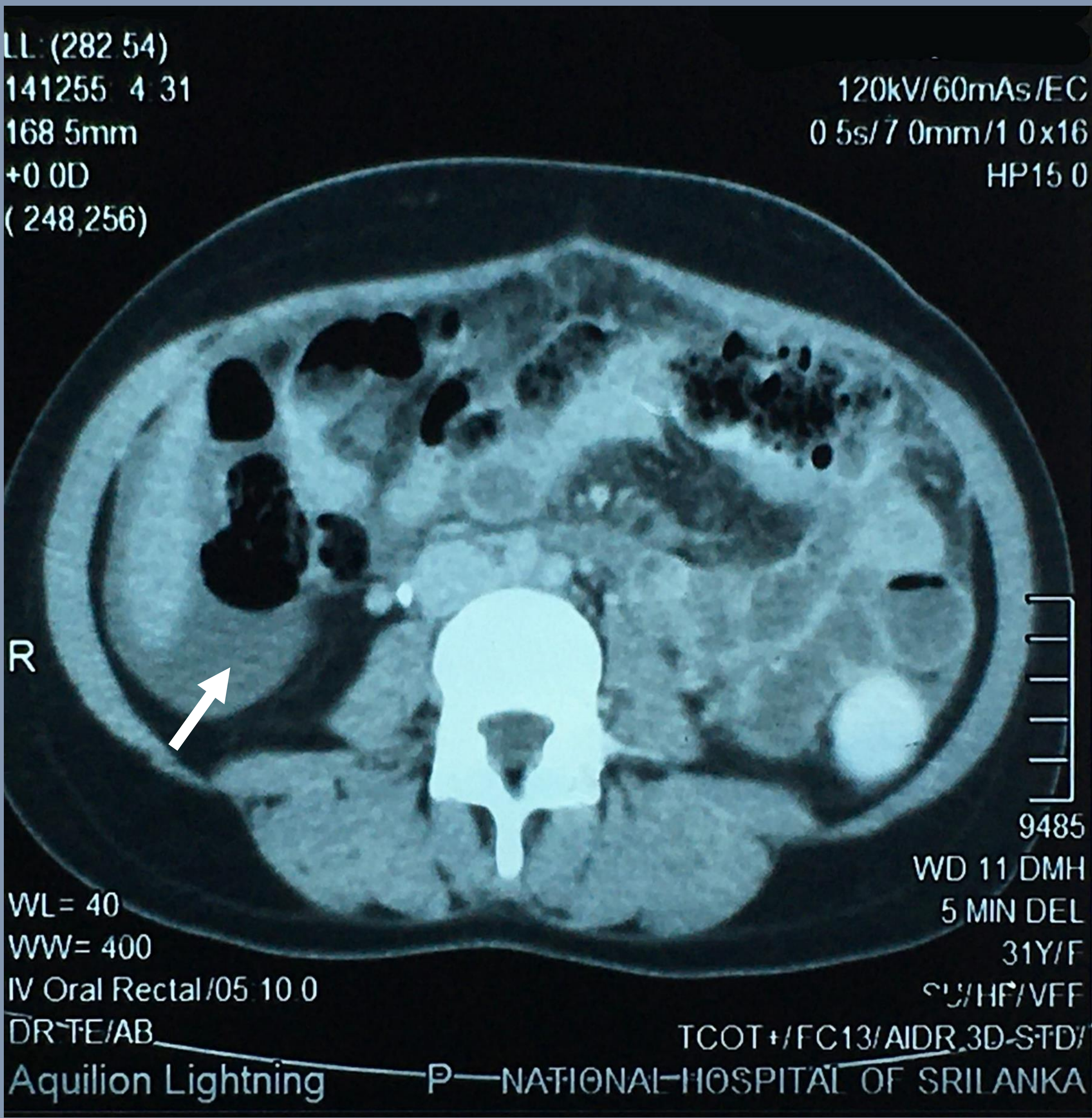


Image 1. Free fluid in peritoneal cavity

Ultrasound scan (USS) abdomen and pelvis showed a moderate amount of free fluid within the peritoneal cavity without definite adnexal mass. USS guided peritoneal fluid cytology showed Red blood cells 15-20/HPF, pus cells 60-70/HPF, and protein 618 mg/dl which was highly suggestive of an inflammatory process. No growth was detected following peritoneal fluid culture.

Contrast-enhanced computed tomography (CECT) abdomen and pelvis revealed Right ovarian vein thrombosis with prominent pelvic veins around the right-side adnexa. A moderate amount of free fluid in the peritoneal cavity, and omental thickening.

Management

Diagnostic laparoscopy was postponed due to positive COVID-19 status. She was started on subcutaneous low molecular weight heparin (LMWH) and IV antibiotics for the urinary tract infection.

She responded to the treatment well and her pain reduced over two weeks. CRP dropped to <1 mg/L, urine full report and urine culture were negative following antibiotics. Repeated USS did not find any evidence of ascites, pleural effusion, para-aortic lymph node enlargement, or any pelvic masses. Bilateral ovaries appeared normal. CA 125 level dropped to 76.2U/ml and other tumor markers were persistently normal after 3 months of treatments.

She was started on warfarin therapy for six months and awaiting Gynae Oncology review planned in 6 months with repeat CA 125 levels, repeat USS/CECT.

Discussion

Infection with COVID-19 is likely to be associated with increased thromboembolic events among pregnant women. USS has a reduced sensitivity (52%) in detecting the OVT as the ovarian vein is obscured by bowel gas, but CECT has a 100% sensitivity. MRI has the highest combined sensitivity and specificity⁵.

Anticoagulation prophylaxis with LMWH is recommended for mothers admitted with COVID 19 infection and advised to continue for 10 days following the discharge from the hospital. Patients with thrombotic events and ongoing morbidity may need a further increase in the dose and duration of the treatment⁶.

References

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