



RARE CASE OF POST PARTUM RIGHT OVARIAN VEIN THROMBOPHLEBITIS

Radio-Diagnosis

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ABSTRACT

Ovarian vein thrombophlebitis is a rare, but serious event occurring following complicated deliveries. Prolonged rupture of membranes prior to delivery is one of the causative factor. We present a case report of a patient with prolonged ruptured membranes, and developed right ovarian vein thrombophlebitis. The patient was medically managed and responded excellently to the treatment.

KEYWORDS

Prolonged ruptured membranes, Ovarian vein thrombophlebitis, Postpartum fever

CASE REPORT

A 26-year-old female, post- LSCS day 15, operated for prolonged rupture of membranes, presented with high grade fever spikes, nausea and abdominal pain. Immediate post-partum period was uneventful.

On examination, there was diffuse lower abdominal tenderness, predominantly in the right iliac fossa. Pelvic examination revealed a non-tender uterus.

Routine blood investigations revealed raised white blood cell count ($13 \times 10^9/L$) with 81 % polymorph nuclear cells.

With the suspicion of acute appendicitis, an ultrasound examination of abdomen and pelvis was performed. However, it did not reveal any significant abnormality.

Since the fever spikes continued despite administration of intravenous antibiotics, blood culture and urine culture were done, which also turned out to be negative.

The patient was subjected to computed tomography (CT) scan for further evaluation. Contrast enhanced CT showed a rounded tubular structure in the right paracaval region, with central non-enhancing hypodensity and peripheral enhancement (Figure 1).

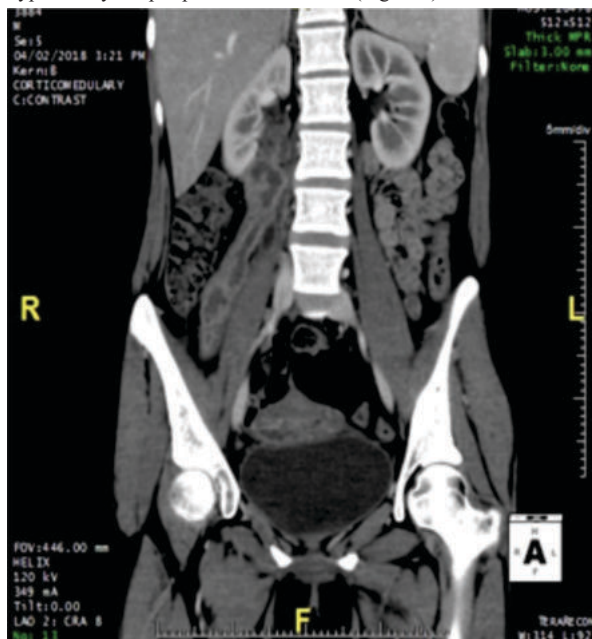


Figure 1

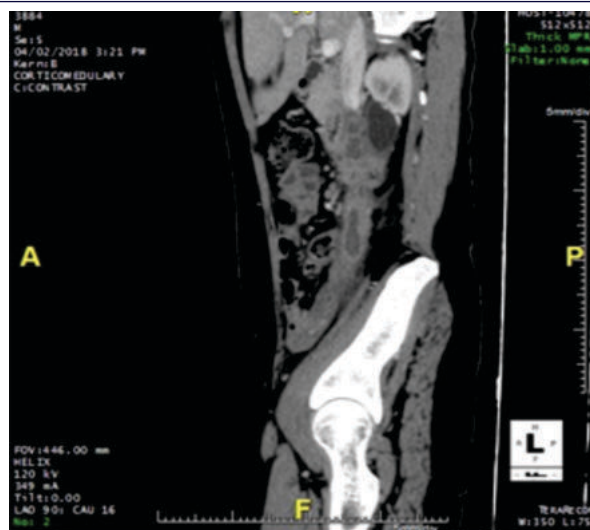


Figure 2

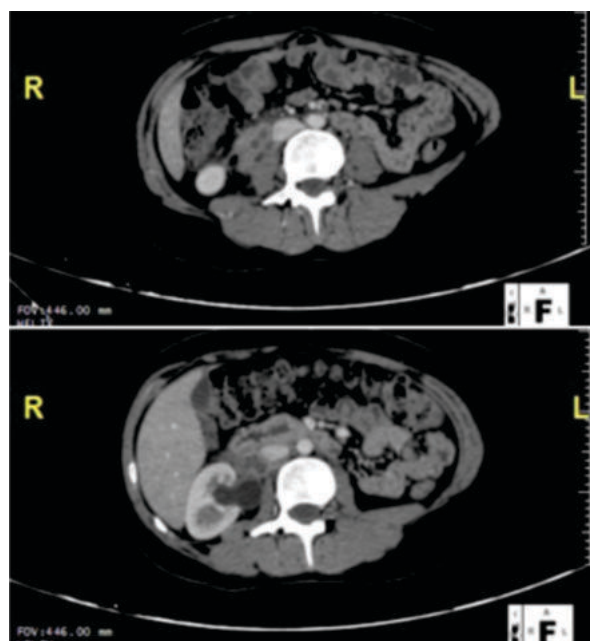


Figure 3

On tracing the structure on continuous sections, caudally it extended towards right half of pelvis (Figure 2) and cranially it joined the inferior vena cava (Figure 3).

Minimal surrounding fat stranding was seen. No other foci of sepsis was seen in the abdomen or pelvis. The findings were consistent with diagnosis of right ovarian vein thrombophlebitis. CT of the chest was also done to rule out pulmonary embolism.

The patient was started on IV low molecular weight heparin and improved significantly within 2 days. On day 7 of treatment, IV anticoagulation was replaced with oral anticoagulants and she was discharged on day 10 of admission.

DISCUSSION

Ovarian vein thrombophlebitis (OVT) is a rare but life-threatening condition, seen most commonly in the post-partum state. The incidence varies between 1 in 600 to 2000 pregnancies. It occurs most commonly between post-partum day 2 to 15.¹

The risk factors are obesity, multiparity, thrombophilias, smoking and systemic lupus erythematosus. Other hypercoagulable states which increase the risk of ovarian vein thrombosis include pelvic inflammatory disease, recent surgery, inflammatory bowel disease, congenital thrombophilic states and malignancies.²

Pathogenesis of OVT in pregnancy is explained by the Virchow's triad. Pregnancy is associated with venous stasis secondary to compression of IVC by enlarged uterus and hypercoagulable state. Endothelial trauma occurs during delivery or due to local inflammation.³

The right ovarian vein is more prone to thrombosis than left and is involved in 80-90% of cases. This is postulated to occur secondary to dextro-rotation of gravid uterus compressing the vein, longer length and presence of multiple incompetent valves in right ovarian vein.⁴

Common presenting symptoms are fever and lower abdomen or flank pain, with associated leukocytosis. Acute appendicitis, abscess, pelvic torsion and pyelo-nephritis are considered in the differential diagnosis.³

Diagnostic modalities available are ultrasound, CT and MRI with sensitivity of 52%, 100% and 92% respectively. Ultrasound is the preferred first-line of investigation because of availability and safety issues and can usually suggest the correct diagnosis. In cases of diagnostic dilemma, CT with contrast is done and helps to reach the final diagnosis in most cases. MRI is free of ionizing radiation and is beneficial for young women. MRI helps in difficult cases because of flow sensitivity and ability to age the venous clot.¹

If not treated timely, complications like sepsis, extension of thrombus into IVC and ileo-femoral vessels and pulmonary thrombo-embolism can occur. The mortality of OVT is as high as 4 % with pulmonary embolism being the most common cause.⁵

Anticoagulation and antibiotics are the mainstay of treatment. There is no standard protocol for duration of anti-coagulation. Thrombophilia screening should be done after stopping the anticoagulants.

In rare case of failure of medical treatment or with severe complications, placement of IVC filter, thrombectomy, hysterectomy and ligation of IVC can be done.⁶

CONCLUSION

Ovarian vein thrombophlebitis is a rare but serious post-partum complication. Early recognition with prompt treatment is necessary to prevent morbidity. Clinical signs are often misleading and a high index of suspicion is required for accurate diagnosis. USG, CT or MRI help in reaching the diagnosis. Anticoagulants and antibiotics are the mainstay of treatment.

REFERENCES

1. Bannow BT, Skeith L. Diagnosis and management of postpartum ovarian vein thrombosis. Hematology 2014, the American Society of Hematology Education Program Book. 2017 Dec 8;2017(1):168-71.
2. Hegde AV. Thromboembolic Disorders during Pregnancy: Cardiologist Perspective. Indian Journal of Cardiovascular Disease in Women-WINCARS. 2018 Aug;3(02/03): 079-85.
3. Arkadopoulos N, Dellaportas D, Yiallourou A, Koureas A, Voros D. Ovarian vein thrombosis mimicking acute abdomen: a case report and literature review. World Journal of Emergency Surgery. 2011 Dec;6(1):1-4.
4. Sinha D, Yasmin H, Samra JS. Postpartum inferior vena cava and ovarian vein thrombosis—a case report and literature review. Journal of Obstetrics and Gynaecology.

2005 Apr 1;25(3):312-3.

5. Nagayama M, Watanabe Y, Okumura A, Amoh Y, Nakashita S, Dodo Y. Fast MR imaging in obstetrics. Radiographics. 2002 May;22(3):563-80.
6. Plastini T, Henry D, Dunleavy K. Ovarian vein thrombus: to treat or not to treat?. Blood advances. 2017 Jun 6;1(15):1120.