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Case Report

A rare case report of post-partum ovarian vein thrombosis after manual removal of placenta

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ABSTRACT

Post-partum ovarian vein thrombosis (POVT) is an uncommon diagnosis that may lead to morbidity or mortality if unrecognized. This report discusses a single case of POVT in our hospital, along with the treatment and clinical course. The mechanism is believed to be right-sided clot formation provoked by anatomical and hormonal changes of gestation. Diagnosis is challenging as most patients are previously healthy and symptoms are often vague. Although the differential is broad, modern imaging is sensitive and specific for diagnosis. Prompt treatment with broad-spectrum antibiotics and anticoagulation may reduce morbidity, and prognosis following treatment is excellent.

Keywords: Ovarian vein thrombosis, Postpartum, Puerperal, Hypercoagulability

INTRODUCTION

Postpartum ovarian vein thrombosis (POVT) is an uncommon complication of the puerperium, occurring in approximately 0.05-0.18% of vaginal deliveries and up to 2% of caesarean sections.[1] It is associated with pregnancy-related hypercoagulability, pelvic infection, and venous stasis.[2,3]

The condition predominantly affects the right ovarian vein due to anatomical and physiological factors, including uterine dextrorotation and direct drainage into the inferior vena cava.[3,4] Because symptoms are often vague, a high index of suspicion is required to prevent serious complications such as pulmonary embolism and sepsis.[5]

CASE REPORT

A 23-year-old gravida 2 woman at 34+4 weeks of gestation presented in active labour. She underwent a preterm vaginal delivery with left mediolateral episiotomy. Active management of the third stage failed, and manual removal of placenta was performed. One unit of packed red blood cells was transfused postpartum.

On postpartum day 1, she developed fever (101°F) and lower abdominal pain. Laboratory investigations showed leucocytosis (15,200/mm³). Despite broad-spectrum intravenous antibiotics, fever persisted with rising leukocyte counts and thrombocytopenia.

Serial ultrasonography initially suggested retained products of conception, which subsequently resolved, but the patient remained febrile.

On postpartum day 10, MRI pelvis revealed a tubular serpiginous structure with altered signal intensity in the right adnexa extending into the inferior vena cava, consistent with right ovarian vein thrombosis. The patient was managed in the intensive care unit with broad-spectrum antibiotics and therapeutic low-molecular-weight heparin.

She improved clinically and was discharged on oral anticoagulation for three months. Follow-up was advised at 1 and 6 months.

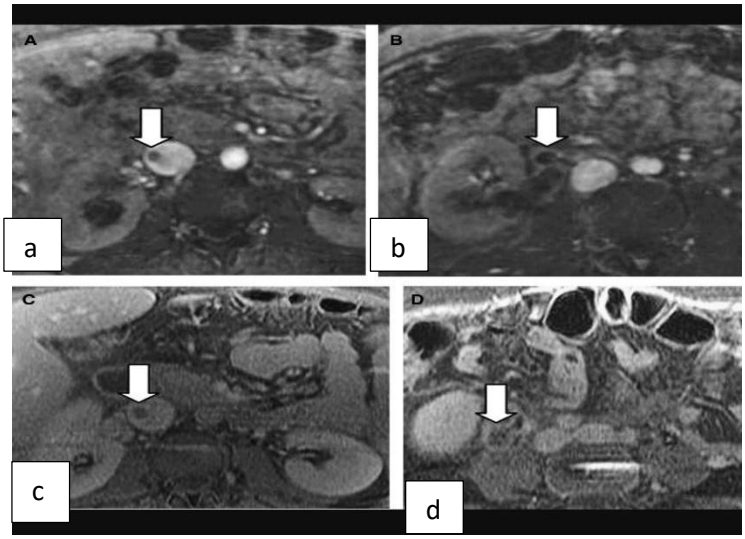

Figure 1 (a-d): MRI pelvis (T2-weighted image) showing a tubular serpiginous structure with altered signal intensity along the course of the right ovarian vein, extending superiorly towards the inferior vena cava, consistent with right ovarian vein thrombosis (arrow).

DISCUSSION

Pregnancy fulfils all components of Virchow's triad-hypercoagulability, venous stasis, and endothelial injury-predisposing to venous thromboembolism.[3,5] The right ovarian vein is more commonly involved due to uterine dextrorotation, longer vein length, incompetent valves, and its acute angle of drainage into the inferior vena cava.[3,4,6] POVT typically presents between the 7th and 10th postpartum day with persistent fever unresponsive to antibiotics and lower abdominal pain.[3,7] Imaging plays a crucial role in diagnosis. Ultrasonography is often used as the first-line modality; however, contrast-enhanced CT or MRI provides higher sensitivity and specificity, with MRI being particularly useful when radiation exposure is a concern.[4,5] Management includes anticoagulation for 3-6 months and broad-spectrum antibiotics when infection is suspected, as recommended by international guidelines.[5,9,10] Early diagnosis and treatment significantly reduce complications, particularly pulmonary embolism, which remains the most feared outcome.[6,8]

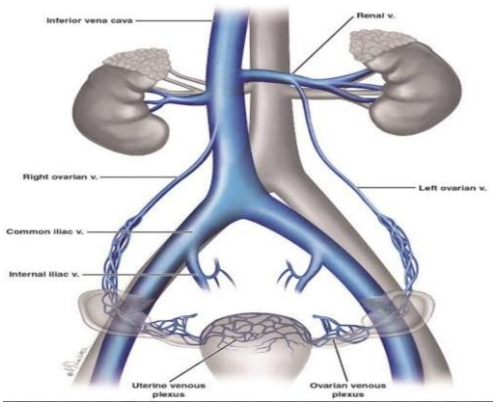

Figure 2: Course of ovarian venous plexus and ovarian vein.

CONCLUSION

Postpartum ovarian vein thrombosis, though rare, should be considered in women with persistent puerperal fever and abdominal pain unresponsive to antibiotics. Timely imaging and prompt initiation of anticoagulation are essential to prevent life-threatening complications. A multidisciplinary approach ensures optimal outcomes.

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