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Clinical Case Reports

Post-Abortion Septic Pelvic Thrombophlebitis With Right Ovarian Vein Thrombosis Complicated By Septic Pulmonary Emboli

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Abstract

Summary: Septic pelvic thrombophlebitis (SPT) is an uncommon but important cause of persistent fever after delivery or gynaecological procedures[1]. Anticoagulation and parenteral antibiotics are the main treatment goals for ovarian vein thrombosis.[2] Ovarian vein thrombosis (OVT) may complicate and lead to septic pulmonary embolism (SPE).[3]A woman in her early 20s presented with high-grade fever and right iliac fossa pain seven days after an induced abortion. Her fever persisted despite 72 hours of broad-spectrum intravenous antibiotics. Contrast-enhanced abdominopelvic computed tomography (CT) revealed a right OVT. Subsequent CT pulmonary angiography confirmed multiple peripheral, partly cavitating nodules consistent with SPE. She was successfully treated with optimized antimicrobial therapy and therapeutic anticoagulation. Fever abated, and interval imaging confirmed thrombus regression. She completed a three-month course of anticoagulation and remained well at follow-up with radiological resolution of pulmonary lesions. SPT should be suspected when postpartum or post-abortion fever fails to respond to adequate antibiotics. Prompt diagnosis with cross-sectional imaging and combined antimicrobial-anticoagulant therapy are essential to prevent complications and ensure a good outcome.

Keywords: Ovarian Vein; Thrombophlebitis; Ovarian Venous Thrombosis; Septic Pulmonary Embolism; Puerperal Disorders.

Introduction

SPT encompasses infection-associated thrombosis of the ovarian veins or deep pelvic venous plexus. It arises from the convergence of endothelial injury, hypercoagulability, and pelvic sepsis. Although rare, a missed diagnosis can lead to embolic complications. Ovarian vein thrombosis (OVT) has a predilection for the right side, a phenomenon attributed to uterine dextro-rotation, the greater length of the right ovarian vein, and its acute angle of insertion into the inferior vena cava. POVT mainly occurs within the first ten days postpartum, especially after cesarean delivery.[5] Diagnostic imaging, like contrast-enhanced abdominopelvic CT scan are gold standard for diagnosis. In case of contraindication, MRI can be used.[4]

Case Presentation

A previously healthy woman, early 20s, presented with seven days of fever (spiking to 39°C) and right lower quadrant pain one week after surgical termination at 9 weeks' gestation. There were no urinary or gastrointestinal symptoms and no thrombotic history.

On admission: temperature 38.9°C, pulse 106/min, blood pressure 108/64 mmHg. Abdominal examination revealed suprapubic and right iliac fossa tenderness without peritonism. Vaginal examination demonstrated uterine and right adnexal tenderness. There was no limb swelling, and the respiratory examination was unremarkable.

Investigations

Laboratory results showed leukocytosis with neutrophilia and raised C-reactive protein; renal and liver functions were within reference limits. Blood and urine cultures were negative. Serum β-hCG declined appropriately.

Pelvic ultrasound revealed a bulky postpartum uterus with trace free fluid. Because fever persisted beyond 72 hours of broad-spectrum antibiotics, a contrast-enhanced CT abdomen/pelvis was requested, demonstrating an enlarged right ovarian vein with a central low-attenuation thrombus, enhancing wall, and perivenous fat stranding—typical of OVT (Figure 1). New pleuritic pain prompted CT pulmonary angiography (Figure 2, 3), which showed multiple bilateral, peripheral nodules—some cavitary—compatible with SPE.

Differential diagnosis

- Endometritis without thrombosis
- Pelvic abscess or infected haematoma
- Acute appendicitis or right ureteric colic
- Urinary tract infection/pyelonephritis
- Catheter-related bloodstream infection

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Treatment

The patient's empiric antibiotic regimen was optimized to provide broad coverage for polymicrobial pelvic pathogens. Therapeutic anticoagulation was initiated with low-molecular-weight heparin, followed by transition to an oral agent for three months due to embolic involvement beyond the pelvis.

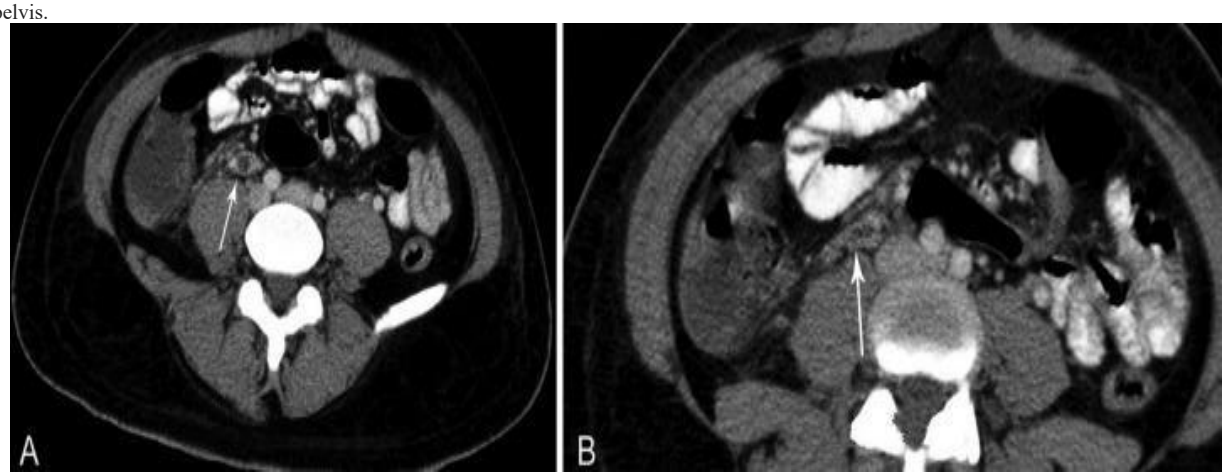

Figure 1: Axial contrast-enhanced CT of the abdomen and pelvis. The arrow indicates an enlarged right ovarian vein with a central low-attenuation thrombus and surrounding perivenous fat stranding

Analgesia and supportive care were provided. No invasive source control was required.

Outcome and follow-up

Defervescence occurred within 72 hours of initiating anticoagulation plus optimised antibiotics. At six weeks, the patient was asymptomatic; repeat CT abdomen/pelvis showed a reduction in thrombus calibre with re-established venous flow. By three months, chest CT demonstrated complete resolution of nodules, and anticoagulation was discontinued.

Timeline

Date/Day	Event
Day 0 (Post-abortion day 7)	Fever and right iliac fossa pain; admitted; broad-spectrum antibiotics started
Day 3	Persistent fever; CT abdomen/pelvis: right ovarian vein thrombosis (OVT) with perivenous stranding
Day 4	CT pulmonary angiography: peripheral nodules consistent with septic pulmonary emboli (SPE); anticoagulation commenced
Day 6–7	Defervescence; pain improved; markers declining
Week 6	Asymptomatic; interval imaging: thrombus regression
Month 3	Pulmonary nodules resolved; anticoagulation stopped.

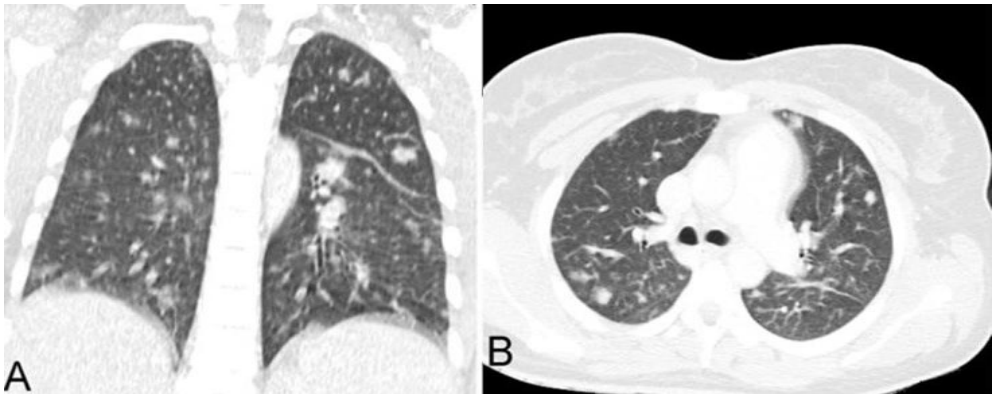

Figure 2: Axial CT pulmonary angiography showing multiple bilateral, peripheral nodules compatible with septic pulmonary emboli/ Coronal CT pulmonary angiography reconstruction demonstrating peripheral, partly cavitating nodules

Patient's perspective

"I kept spiking fevers despite strong antibiotics. Scans showed a clot in a pelvic vein and spots in my lungs. After starting blood thinners and continuing antibiotics, the fevers stopped, and I steadily recovered."

Informed consent

Written informed consent for publication of the case details and images was obtained using the BMJ consent form; a copy is held by the authors and is available to the journal on request.

Learning points

- Suspect septic pelvic thrombophlebitis when postpartum/post-abortion fever persists despite adequate antibiotics.
- Right ovarian vein thrombosis is common; CT or MR venography confirms the diagnosis.
- In the presence of septic pulmonary emboli, treat with appropriate antibiotics plus therapeutic anticoagulation and extend duration (typically ~3 months).

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