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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 h of broad-spectrum intravenous antibiotics. Contrast-enhanced abdominopelvic computed tomography (CT) revealed right OVT. Subsequent CT pulmonary angiography confirmed multiple peripheral, partly cavitating nodules consistent with SPE. She was successfully treated with optimised antimicrobial therapy and therapeutic anticoagulation. The fever subsided, and interval imaging confirmed thrombus regression. She completed a three-month course of anticoagulation and remained well at follow-up, with radiological resolution of the pulmonary lesions. SPT should be suspected when postpartum or post-abortion fever fails to respond to adequate antibiotics. Prompt diagnosis using 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 and deep pelvic venous plexus. It arises from the convergence of endothelial injury, hypercoagulability, and pelvic infection. Although rare, missed diagnoses 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 the acute angle of its insertion into the inferior vena cava. POVT mainly occurs within the first ten days postpartum, especially after caesarean delivery.[5] Diagnostic imaging, such as contrast-enhanced abdominopelvic CT, is the gold standard for diagnosis. In cases of contraindications, MRI can be used.[4]

Case Presentation

A previously healthy woman in her 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. The patient had no urinary or gastrointestinal symptoms and no history of thrombosis.

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

Investigations

Laboratory results showed leukocytosis with neutrophilia and elevated C-reactive protein levels, while renal and liver functions were within reference limits. Blood and urine cultures were negative for pathogens. The serum β-hCG levels 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, an enhancing wall, and perivenous fat stranding, which is typical of OVT (Figure 1). New pleuritic pain prompted CT pulmonary angiography (Figure 2 and 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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MK SM - Drafting
AA NA - Critical Review

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Treatment

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

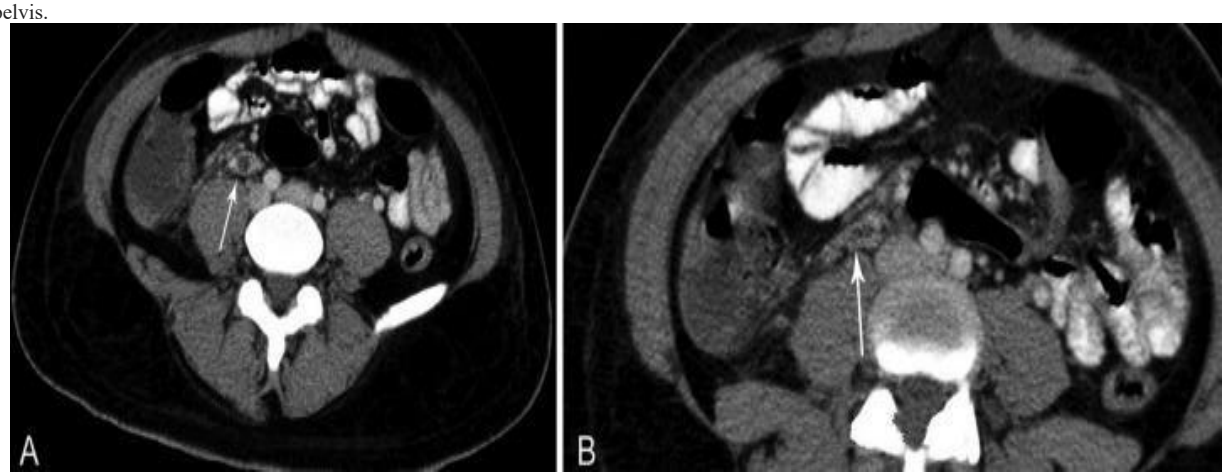

Figure 1: Axial contrast-enhanced CT of the abdomen and pelvis. The arrow indicates an enlarged right ovarian vein with a central low-attenuation thrombus and surrounding perivenous fat stranding

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 antibiotic therapy. At six weeks, the patient was asymptomatic, and repeat CT abdomen/pelvis showed a reduction in thrombus calibre with re-established venous flow. By three months, chest CT demonstrated complete resolution of the 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.

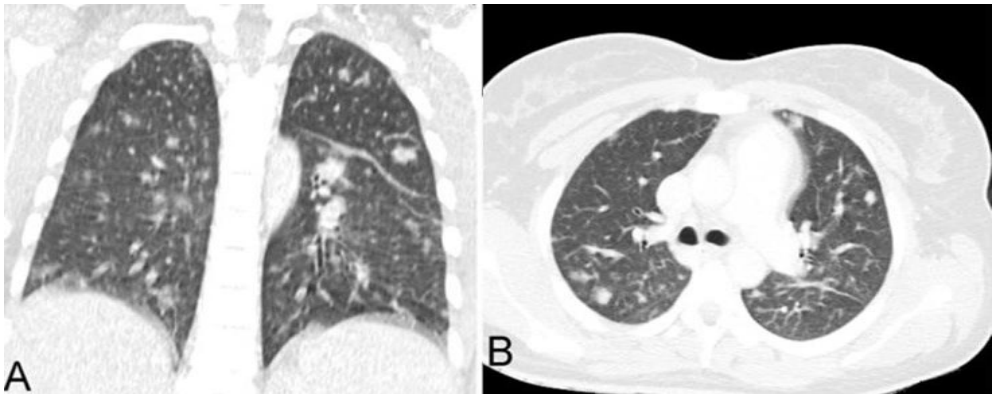

Figure 2: Axial CT pulmonary angiography showing multiple bilateral, peripheral nodules compatible with septic pulmonary emboli/ Coronal CT pulmonary angiography reconstruction demonstrating peripheral, partly cavitating nodules

Patient's perspective

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

Informed consent

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

Learning points

- Suspect septic pelvic thrombophlebitis when postpartum or 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, treatment with appropriate antibiotics plus therapeutic anticoagulation and extended duration (typically ~3 months) is recommended.

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