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CASE OF PRE-ECLAMPSIA WITH SEVERE FEATURES AND DEEP VENOUS THROMBOSIS IN MULTIPLE GESTATION

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CASE OF PRE-ECLAMPSIA WITH SEVERE FEATURES AND DEEP VENOUS THROMBOSIS IN MULTIPLE GESTATION

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ABSTRACT

High-risk pregnancies may result from maternal age, multiple gestation, preeclampsia, and pre-existing conditions.
Case Presentation: **A 33-year-old with twin gestation at 38 weeks presented with preeclampsia and DVT.**
Management: **She underwent caesarean delivery but developed multiple complications.**
Conclusion: **This case highlights the complexity of managing high-risk pregnancies and the need for timely care.**

INTRODUCTION

Pregnancy is a physiological state, but certain maternal conditions can transform it into a high-risk one. These include preeclampsia, multiple gestation, and thromboembolic events such as deep venous thrombosis, which can interact and amplify maternal and foetal risks. Preeclampsia is a pregnancy-specific disorder characterized by new-onset hypertension and proteinuria after 20 weeks of gestation and is a leading cause of maternal and perinatal morbidity and mortality worldwide [1,2]. It predisposes women to a hypercoagulable state, increasing the risk of venous thromboembolism, especially when compounded by multiple gestation or delayed intervention.

Deep venous thrombosis, the formation of a blood clot in the deep veins, commonly in the lower limbs, is a serious condition during pregnancy. It carries a fivefold increased risk compared to the non-pregnant state and can lead to fatal complications such as pulmonary embolism if not promptly diagnosed and managed [3,4].

This case illustrates a medically significant and rare scenario of a 33-year-old woman with twin gestation who presented with preeclampsia, confirmed DVT, and experienced multiple peripartum complications including hypotension, haemorrhage, and ultimately, hysterectomy. The patient survived, qualifying this as a near-miss maternal morbidity [5]. The global burden of preeclampsia and DVT in pregnancy emphasizes the need for evidence-based management to prevent mortality [6,7].

Key words: Pregnancy, preeclampsia, deep venous thrombosis

Patient and Observation

History of Present Illness: A 33-year-old gravida 4 para 3 woman at 38 weeks with twin gestation was referred from a peripheral facility to Kenyatta National Hospital, a tertiary center in Kenya, with complaints of worsening leg swelling, elevated blood pressure, and reduced foetal movements. She had experienced persistent headaches, visual disturbances, and right leg discomfort for one week prior to referral. Her antenatal period had been largely uneventful until the third trimester when her blood pressure began to rise. There were no reports of medication use, including antihypertensives or anticoagulants, before admission.

Patient Information: A 33-year-old female, mother of three, with twin gestation at 38 weeks presented to Kenyatta National Hospital, a tertiary centre in Kenya, as a referral.

Physical Examination: On admission, she appeared sick-looking and pale. Her BP was 167/105 mmHg, pulse 88 bpm, respiratory rate 22, and temperature 36.0°C. She had right lower limb pitting oedema to the groin. Cardiovascular and respiratory exams were unremarkable. Abdominal exam revealed a distended uterus, multiple foetal parts, and no uterine tenderness or contractions. No signs of neurological irritability, clonus, or hyperreflexia.

Lab Results: Haemoglobin 9.3 g/dl, platelets 74×10^9/L, potassium 4.62 mmol/L, and creatinine 1770.6 μmol/L. Urinalysis was undocumented. Coagulation profile was normal.

Diagnostic Assessment: Doppler ultrasound confirmed DVT in the right common femoral vein. A diagnosis of severe preeclampsia with DVT was made.

Pre-operative Care: Management included magnesium sulphate for seizure prophylaxis, labetalol for BP control, and heparin for anticoagulation. Heparin use close to delivery raised bleeding concerns; timing documentation was unclear.

Initial Surgery: Emergency caesarean section delivered two live female infants (2870g, 2450g) with good APGARs. Postoperatively, she developed hypotension managed with fluids and 2 units packed RBCs. She was admitted to ICU and later moved to the ward.

Postoperative Complications: She developed respiratory distress (SpO_2 30–40%), abdominal distension, and reduced bowel sounds. CT and paracentesis confirmed hemoperitoneum. Labs: Hb 6 g/dl, platelets 145×10^9/L, potassium 6.1 mmol/L, urea 6.0 mmol/L, creatinine 203 μmol/L. Dialysis was given once. Slightly prolonged bleeding time suggested possible coagulopathy.

Reintervention: Relook laparotomy revealed ~500ml hemoperitoneum with diffuse oozing. A right uterine hematoma was evacuated; 2 units of blood were transfused.

Hysterectomy and Recovery: On day five, she had heavy vaginal bleeding. Uterotonics, tranexamic acid, and 4 units of blood were given. Surgical exploration found minimal hemoperitoneum (~100ml), hematomas, and intrauterine hematoma (~800ml). Uterine atony or coagulopathy was suspected; hysterectomy was performed. She was extubated the next day, had incisional bleeding controlled with pressure. Transferred to ward and transfused 2 more units. On day 7, ultrasound showed pleural effusion, early renal disease, and hydronephrosis.

Follow-up and Outcomes: Chest x-ray showed lung opacities consistent with hospital-acquired pneumonia. Treated with antibiotics, haematinics, antacids, and antiemetics. Discharged 6 days later in stable condition.

Patient perspective: "I am really grateful for the care and support offered"

Informed Consent: The patient gave informed consent (Consent for case 2 report.pdf).

Discussion

Preeclampsia is associated with defective trophoblastic invasion and uteroplacental hypoperfusion, leading to systemic endothelial dysfunction and multi-organ compromise [2]. In this 38-week twin gestation, these changes likely contributed to her severe presentation with hypertension, pallor, and rapid deterioration, consistent with complications seen in multiple gestations. Her progression to hemoperitoneum and hysterectomy illustrates how preeclampsia can evolve into a complex, multi-system crisis. The coexistence of thrombotic and haemorrhagic events highlights the clinical challenge of balancing these opposing risks.

Pregnancy is a prothrombotic state, and this patient had multiple risk factors for DVT: age, multiple gestation, hypertensive disease, and recent delivery [4,5]. While postpartum DVT was appropriately diagnosed, initiating anticoagulation after major surgery posed bleeding risks. LMWH was started to prevent clot progression and new thrombus formation, with planned

discontinuation 24 hours before delivery. A multidisciplinary team, including obstetrics, haematology, and anaesthesiology, coordinated timing. Uterine atony, DIC, and HIT were considered; however, there was no evidence of DIC or HIT, and uterine tone was adequate. The haemorrhage was attributed to surgical bleeding and was promptly managed.

Although imaging likely followed standard protocols [6,4], this case raises concerns about the risk-benefit balance of initiating anticoagulation postpartum. Anticoagulants should ideally be paused before delivery [8,9], and reintroduction depends on clinical stability. Given significant bleeding, alternatives like an IVC filter may have been safer [10].

The patient's postpartum haemorrhage and surgical outcome qualify as a maternal near-miss per WHO criteria, a missed opportunity for structured reflection and system learning. This case illustrates the delicate balance between anticoagulation and haemorrhage in obstetric care. Severe preeclampsia and postpartum DVT, followed by massive haemorrhage, demonstrate how complications can rapidly cascade. Key lessons include the need for multidisciplinary planning, individualized risk assessment, and timely use of alternative strategies like IVC filters. Contextualized care, not just adherence to guidelines, is essential for improving maternal outcomes.

Conclusion

This case illustrates the complexity of managing preeclampsia with concurrent DVT, where anticoagulation increased haemorrhagic risk. It underscores the importance of timely surgical intervention, multidisciplinary care, and individualized management with close monitoring in tertiary settings for rare, high-risk pregnancies involving competing clinical priorities.

Conflict of Interest

The authors declare no conflict of interest.

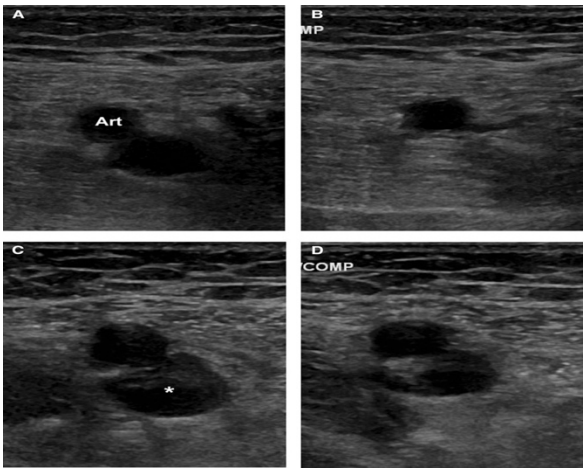
Authors' Contributions

JOA: study concept, data curation, methodology, project management and writing (original draft, review and editing). CO, RJK, CWB, RBM, OO: study concept, methodology, project management and writing (review and editing).

Authors have read and approved the final manuscript.

Figures

Figure 1: Ultrasound of the lower limb revealing diffuse deep vein thrombosis



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