



Case Report

Left Lower Quadrant Pain as the Only Presentation of Iliofemoral DVT in a Pregnant Woman in the Emergency Department: A Case Report

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Citation: Aldamiri K, Altamimi D (2023) Left Lower Quadrant Pain as the Only Presentation of Iliofemoral DVT in a Pregnant Woman in the Emergency Department: A Case Report. Emerg Med Inves 8: 10124. DOI: 10.29011/2475-5605.110124

Received Date: 16 November, 2023; **Accepted Date:** 22 November, 2023; **Published Date:** 27 November, 2023

Abstract

The case of 28 years old woman who was 21 weeks pregnant is described: the patient presented to the emergency medicine department with a one-week history of left lower abdominal quadrant pain. There were no clinical signs of Deep Venous Thrombosis (DVT). Point-of-Care Ultrasound (PCOUS) showed left external iliac vein thrombus. This case report represent the importance of keeping a high index of suspicion to undifferentiated causes of localized pain in pregnancy and the utilization of POCUS in such cases. The Patient was admitted to the hospital and started on low-molecular-weight heparin. Subsequently she had an uneventful pregnancy and delivery.

Introduction

Each year more than 500,000 people are diagnosed with Venous Thromboembolism (VTE), which includes Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE). Pregnant Women in particular are at greater risk of thromboembolism from the very beginning of pregnancy until the end of puerperium with an incidence of 1 in every 1600 patients.

By presenting this case, we emphasize on the importance of early detection and recognition of the subtle findings of DVT in pregnancy and the importance of bedside ultrasonography in the detection of DVT. Our case is a 28 years old female, with unremarkable medical or surgical history, in her 21-weeks of pregnancy, who had recurrent visits to the Emergency Medicine Department on a span of 3 days, complaining of left lower quadrant pain extending to the inguinal area. This patient had no clinical signs of Deep Venous Thrombosis (DVT) at the time she

was examined, bedside ultrasound was performed and showed thrombus in the external iliac vein.

Case Presentation

A 28 years old para 1 woman in her 21 weeks gestation who presented to the Emergency Department (ED) with history of severe, sharp, constant left lower quadrant pain extending to the inguinal area for 3 days. She reported worsening of the pain for 1-week duration associated with on/off constipation; no other complaints were reported by the patient. Patient denied vaginal bleeding or discharge. No history of diarrhea or vomiting. Patient denied lower limb pain, swelling, skin discoloration, chest pain, respiratory symptoms or urinary symptoms. She had no recent travel nor medication or herbal use. She was a non-smoker with a normal Body Mass Index (BMI). Her surgical history was only significant for sleeve gastrectomy done five years ago. Her family history was only significant for hypertension in both parents.

Patient was evaluated by obstetrics department in her previous presentation to the ED as part of our hospital policy and a gynecological scan revealed an intrauterine viable fetus and no ovarian pathologies. Her vital signs at presentation were unremarkable apart from heart rate of 115 beats/minutes and a temperature of 38.1°C. On examination, patient had significant tenderness on palpation of the left lower quadrant with no guarding. The pelvic examination was unremarkable, with no cervical changes.

Examination of the lower limb showed no swelling, erythema or distinctive features of DVT. Blood tests including complete blood count, chemistry, and liver function tests were within normal limits. Urinalysis revealed no red blood cells and few white blood cells with negative urine culture results on her previous visits.

Electrocardiography was performed and showed normal sinus rhythm. A bedside pelvic ultrasound was performed in the ED by emergency physician that showed non-compressible proximal left iliac venous thrombosis (Figure 1) with extension into the common femoral vein (Figure 2) and popliteal vein (Figure 3).



Figure 1: A thrombus is seen in the left iliac vein.

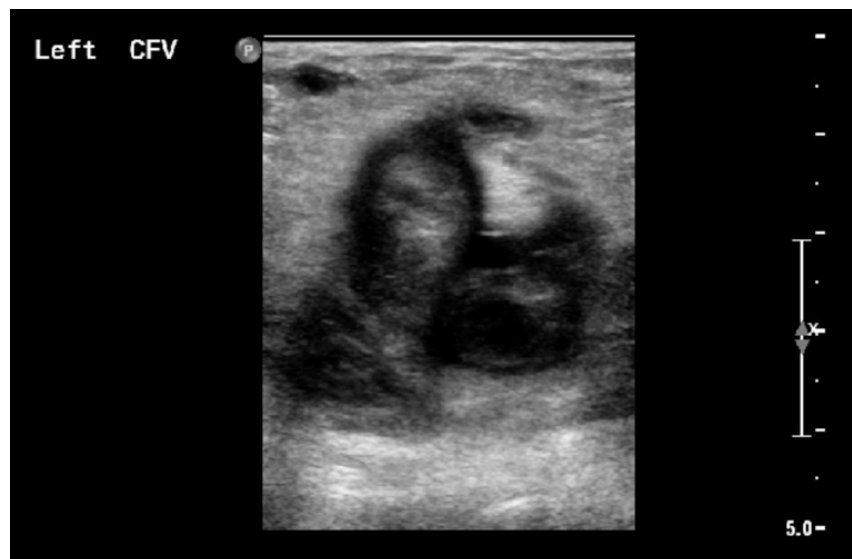


Figure 2: An extension of the thrombus reaching the left common femoral vein.

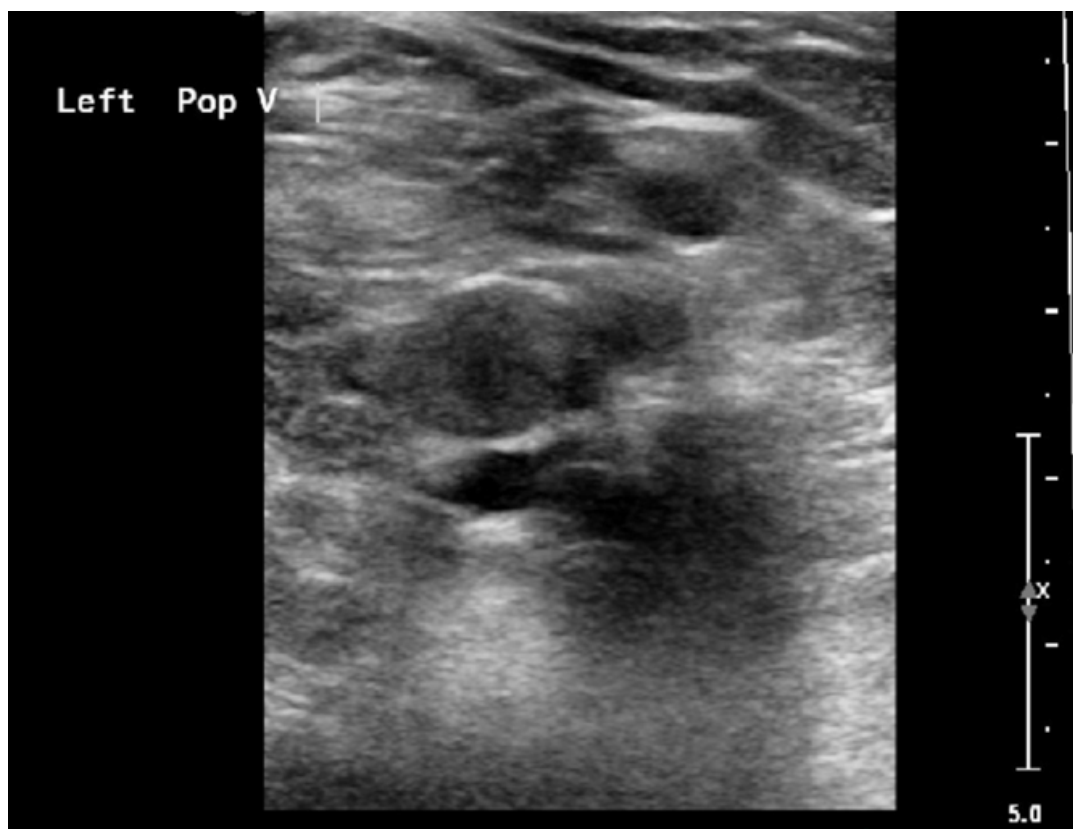


Figure 3: A thrombus is seen in the left popliteal vein.

The patient was started on a therapeutic dose of Low Molecular Weight Heparin (LMWH) and was sent to the radiology department on the same day for official ultrasound scan that confirmed the findings. Patient was discharged after internal medicine evaluation on a therapeutic dose of LMWH to be continued for the rest of her pregnancy and post-partum period. The patient has been followed up by internal medicine and obstetrics with uneventful pregnancy.

Discussion

Deep venous thrombosis is a blood clot that forms in deep veins, most commonly in the lower extremities. It is considered a serious and potentially life-threatening condition, as the blood clot can travel to the pulmonary vascular system and result in a pulmonary embolism. Pregnancy is a well-known and well established risk factor for Venous Thromboembolism (VTE), with pregnant women having a fourfold increased risk of VTE in compared with non-pregnant women [1]. More than 70% of DVTs in pregnancy are Iliofemoral compared to 9% in non-pregnant patients [2]. Moreover, 90% of DVTs in pregnancy are left sided compared to 55% in non-pregnant patients [3].

The incidence of DVT amongst Saudi pregnant women are estimated to be 1.25 per 100 deliveries with a mortality rate of 0.025 cases per 1000 deliveries [4]. One Saudi study reported that the incidence of DVT in the post-partum population is estimated to be around 9% [5].

The typical clinical suspicion of DVT depends on patient history and clinical signs of lower limb swelling and pain, with some patients presenting with erythema and warm isolated extremity. In pregnant women, groin or pelvic pain can be the only presenting symptom.

For suspected cases of DVT, Doppler ultrasonography is the imaging modality of choice for the diagnosis of proximal DVT with a reported overall sensitivity of 95% and specificity of 96% [6]. In the Emergency Department, compression ultrasonography is used more frequently to diagnose proximal DVTs. A study showed that emergency medicine physicians has a negative predictive value of 96% performing two-point compression technique to diagnose DVT in femoral and popliteal veins when compared with femoral duplex Ultrasound [7]. Another study revealed that emergency medicine residents with limited ultrasound experience have 100%

sensitivity and 92% specificity in using two-point compression technique when compared to formal radiology Doppler ultrasound [8]. Given the challenge in diagnosing DVT in pregnant population, it is still recommended that the highly suspicious pregnant patients presenting to the emergency department undergo compression of the entire proximal venous system to exclude DVT. However, visualization and assessment of iliac veins by ultrasonography is challenging due to excess bowel gas, large body habitus, in situ inferior vena cava filter, postsurgical abdomen or pregnancy. Therefore, in the presence of a strong clinical suspicion of iliac venous thrombosis with a negative ultrasound, further assessment is warranted. A venographic assessment of the iliac veins or Magnetic Resonance Direct Thrombus Imaging (MRDTI) is most likely to be indicated [9].

Conclusion

Thromboembolism in pregnancy can lead to catastrophic events to both mother and fetus hence early detection and management is of the essence. It is important for emergency medicine physician to have a high index of suspicion and to be aware of the limitation of compression ultrasonography in diagnosing Iliofemoral DVTs with the importance of continued scanning above the inguinal ligament in such cases.

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