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Case Report

## Vulvar varicosities in pregnancy – concealed veins and unexpected complications: a rare case report

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### ABSTRACT

Vulvar varicosities are an uncommon manifestation of venous congestion during pregnancy, reported in 2-4% of pregnant women and usually resolving spontaneously after delivery.<sup>1</sup> Rarely, they may be associated with intrapartum or postpartum complications such as rupture and hematoma formation.<sup>3</sup> We report a primigravida with unilateral vulvar varicosities presenting in active labor who underwent vaginal delivery with preventive intrapartum measures. Postpartum development of a vulvar hematoma required surgical evacuation, followed by imaging-guided conservative management<sup>6</sup>. The patient developed a postpartum vulvar hematoma requiring incision and drainage, blood component therapy, and close monitoring. Imaging demonstrated a residual organized hematoma with extensive vulvovaginal varicosities and no active arterial bleeding. Conservative management resulted in gradual resolution and complete recovery. Vulvar varicosities are not an absolute contraindication to vaginal delivery; however, vigilant postpartum surveillance is essential. Early recognition and timely intervention can prevent significant maternal morbidity.

**Keywords:** Vulvar varicosities, Pregnancy, Vaginal delivery, Vulvar hematoma, Postpartum haemorrhage

### INTRODUCTION

Vulvar varicosities are dilated venous channels involving the vulva and perineum that commonly develop during pregnancy due to hormonal influences, increased pelvic blood flow, and mechanical compression of pelvic veins by the gravid uterus.<sup>1</sup> Most cases are asymptomatic and resolve spontaneously after childbirth.

Despite their benign nature, vulvar varicosities raise concern during labor owing to the perceived risk of rupture and hemorrhage. Current literature suggests that vulvar varicosities alone do not mandate caesarean section, and the mode of delivery should be individualized.<sup>2</sup> Postpartum vulvar hematoma is a rare but potentially

serious complication that can result in significant concealed blood loss if not promptly recognized.<sup>3</sup>

### CASE REPORT

A 26-year-old primigravida at 39 weeks of gestation presented in the active phase of labor to a tertiary care hospital. She had received regular antenatal care and had no significant medical or surgical history.

Local examination revealed small to medium-sized bluish, tortuous veins in the left posterolateral vulvar region, consistent with vulvar varicosities. No varicosities were noted at other anatomical sites. General and systemic examinations were unremarkable.

In view of evidence supporting vaginal delivery in selected patients with vulvar varicosities, labor was allowed to progress spontaneously under close maternal monitoring.<sup>2</sup> To avoid injury to the visible varicosities, a right-sided mediolateral episiotomy was performed. Vaginal delivery of a 3.25-kg neonate was uneventful, and the episiotomy was repaired in three layers and the patient was monitored

closely. Six hours postpartum, the patient developed severe perineal pain. She was hemodynamically stable. Local examination revealed a tense, bluish swelling measuring approximately 5×4 cm over the right labia majora, consistent with a vulvar hematoma and trickling of blood from the episiotomy site (Figure 1).

**Table 1: Comparison of pre-delivery and post-delivery laboratory parameters.**

	Pre-delivery	Post-delivery day 1
<b>Hemoglobin (g/dl)</b>	12.4	7.5
<b>Platelet count (×10<sup>3</sup>/μl)</b>	1,56,000	1,24,000
<b>Total leukocyte count (×10<sup>3</sup>/μl)</b>	8,000	25,000
<b>Renal function tests (BUN, creatinine)</b>		7/0.6
<b>Liver function tests (total bilirubin, SGOT, SGPT)</b>		0.6/77/85
<b>Prothrombin time / INR</b>		14.3/1.22
<b>Fibrinogen/ D-dimer</b>		3.25/186

Laboratory investigations demonstrated a significant fall in hemoglobin levels along with leukocytosis and mild coagulation derangement (Table 1). After arranging blood products, vaginal exploration under anesthesia was performed. A vulvar hematoma extending up to the ischiorectal fossa was drained, evacuating approximately 200 mL of clotted blood.



**Figure 1: Postpartum right-sided vulvar hematoma.**

Multiple bleeding points were ligated, vasopressin infiltration was administered, a Jackson–Pratt drain was placed, and vaginal packing was performed.<sup>5</sup> Postoperatively, a swelling of 3x4 cm persisted at the same site, which prompted further imaging. Ultrasonography revealed subcutaneous oedema. Contrast-enhanced computed tomography showed a residual organized hematoma with extensive vulvovaginal and pelvic varicosities (Figure 2). CT angiography demonstrated no arterial blush, excluding active arterial bleeding<sup>6</sup> In view of clinical stability, conservative management was continued.



**Figure 2: Contrast-enhanced CT pelvis showing residual vulvar hematoma and pelvic varicosities.**



**Figure 3: Follow up of the case on day 21 postoperatively.**

Serial assessment showed gradual reduction in hematoma size and drain output, and the patient was discharged in stable condition (Figure 3).

## DISCUSSION

Vulvar varicosities arise due to progesterone-mediated venous dilatation, increased circulating blood volume, and obstruction to venous return during pregnancy.<sup>1</sup> Although most cases remain asymptomatic, complications such as rupture, thrombosis, and postpartum hematoma formation have been described.<sup>3,4</sup> The choice of mode of delivery remains controversial. Available literature supports vaginal delivery in selected patients, provided meticulous intrapartum planning and skilled perineal support are ensured.<sup>2</sup> Caesarean section should be reserved for extensive varicosities or obstetric indications. Postpartum vulvar hematoma is a rare but potentially life-threatening complication. Surgical evacuation is indicated in large, expanding, or symptomatic hematomas, while imaging plays a crucial role in excluding ongoing bleeding and guiding further management.<sup>6</sup> Reports of non-obstetric vulvar hematomas further emphasize the need for heightened clinical suspicion and prompt intervention.<sup>8</sup> Standard obstetric texts stress continued postpartum vigilance even after an apparently uncomplicated vaginal delivery.<sup>7</sup>

## CONCLUSION

Vulvar varicosities in pregnancy are typically benign but may lead to unexpected postpartum complications such as vulvar hematoma despite an apparently uncomplicated vaginal delivery. This case reinforces that vaginal birth remains a safe and appropriate option in carefully selected patients when meticulous intrapartum precautions are undertaken. Importantly, it advances current understanding by highlighting the need for high clinical suspicion in the presence of disproportionate postpartum perineal pain and demonstrates the complementary role of timely surgical evacuation and targeted imaging in guiding management. Vigilant postpartum monitoring and individualized multidisciplinary care are essential to optimize maternal outcomes in this uncommon but clinically significant condition.

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