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Severe Vulvar Varicosities in Pregnancy: A Case Report on Multidisciplinary Management and Successful Vaginal Delivery

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Abstract

Severe vulvar varicosities during pregnancy can pose unique challenges in obstetric care, particularly due to concerns about bleeding during delivery. While often benign and self-resolving postpartum, severe cases may complicate decision-making regarding the safest mode of delivery. We present herein a case of a term pregnancy complicated by extensive vulvar varicosities. Although initially scheduled for cesarean section due to possible increased risk of bleeding, the patient was ultimately managed through a multidisciplinary approach and successfully delivered vaginally without complications. In the absence of additional obstetric indications, a trial of vaginal delivery is a reasonable option, provided the delivery occurs in a well-equipped setting with surgical backup. Collaboration between obstetricians, anesthesiologists, and vascular surgeons, along with thorough patient counseling, is essential for optimal maternal and neonatal outcomes.

Categories: Obstetrics/Gynecology, General Surgery, Anesthesiology
Keywords: cesarean section, labor, mode of delivery, pregnancy, vaginal delivery, vulvar varicosity

Introduction

Vulvar varicosities (VVs) are enlarged veins in the vulvar region, which commonly arise or worsen during pregnancy. They occur in approximately 4% of women and are rare outside pregnancy [1]. Severe VVs, though rare, make obstetric decision-making extremely challenging. Clear guidelines on the optimal mode of delivery for such cases are lacking. Concerns regarding possible rupture of the markedly engorged and fragile varices during vaginal delivery led several obstetricians to prefer elective cesarean section (CS) [2]. However, the presence of VVs alone are not an indication for CS [3]. With careful management, vaginal delivery is often feasible, and most cases resolve spontaneously postpartum. The current case report highlights various important considerations and demonstrates how successful vaginal delivery can be achieved, even in the presence of extensive VVs.

Case Presentation

A 25-year-old, G4P3L3 at 38+1 weeks of gestation, presented in latent labor with prominent painless vulvar swelling. Her pregnancy had been uneventful until she noticed enlarging veins over her vulva and pubic region since the eighth month of pregnancy. She also gave a history of prominent veins over her right lower limb from the fifth month of pregnancy. She had three prior uneventful vaginal deliveries and recalls a similar but mild vulvar swelling in her third pregnancy, which resolved spontaneously postpartum.

Her general examination was unremarkable except for the presence of varicosities over the right lower limb (Figure *1*). Obstetric examination revealed a single live intrauterine fetus in cephalic presentation. On local examination, extensive VVs were noted, affecting the bilateral labia majora and extending to the mons pubis as well as the inner thighs (Figure *1*). The veins appeared engorged, forming a soft, compressible, non-tender bluish mass. The surrounding tissue was mildly edematous, and palpation elicited no tenderness or signs of thrombosis or bleeding. Speculum examination showed no vaginal involvement, and cervical findings were consistent with early labor.

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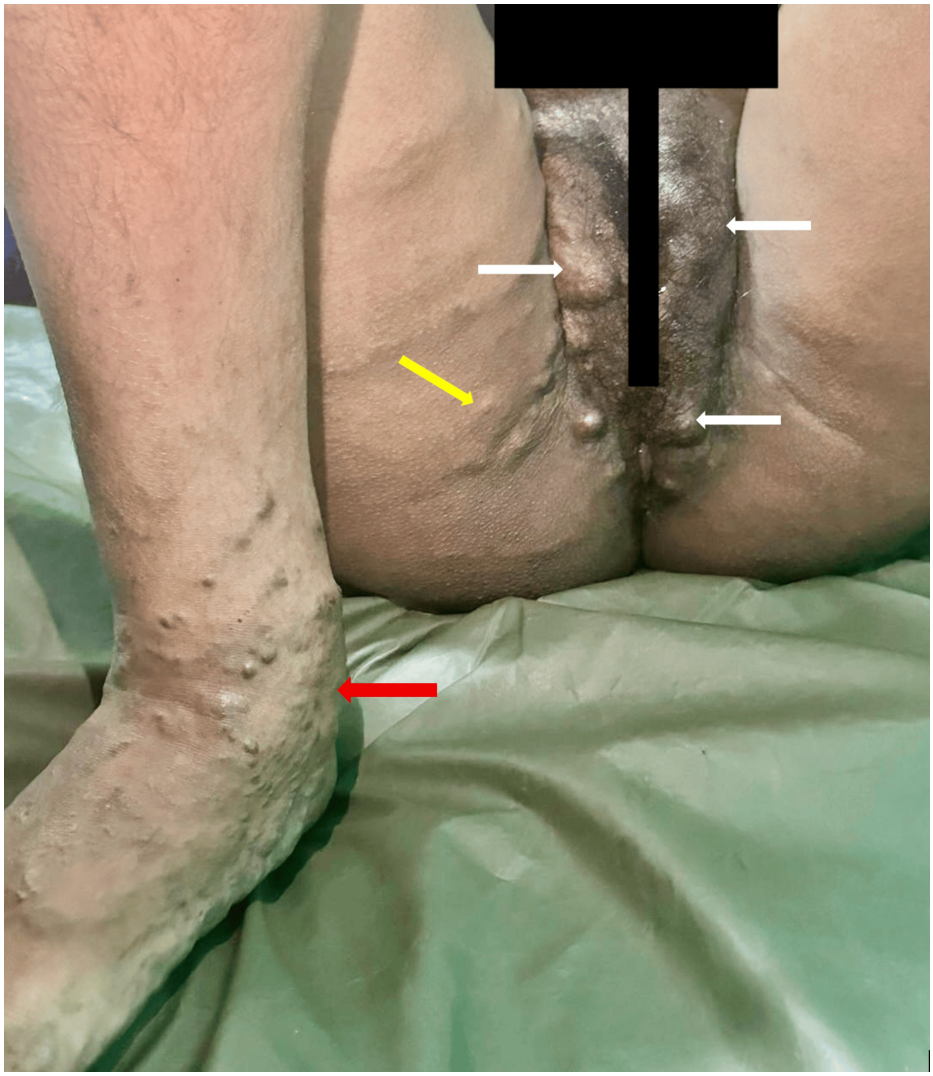


FIGURE 1: Vulvar varicosities (white arrows), right lower limb varicosities (red arrow), and inner thigh varicosities (yellow arrow) in a woman at term pregnancy in early labor

She was scheduled for elective CS at the referring hospital due to concerns about potential hemorrhage. However, seeking further evaluation, she was referred to our tertiary care center, which specializes in high-risk obstetric care.

A multidisciplinary team including obstetricians, vascular surgeons, and anesthesiologists evaluated the patient. Since there were no additional obstetric indications necessitating a cesarean, the risks and benefits of vaginal versus cesarean delivery were discussed with the patient. While VVs posed bleeding risk, that CS also carried risks, particularly related to surgical complications and delayed recovery, were explained to the patient. After thorough counseling, the patient opted for a trial of labor in our fully equipped facility, with surgical backup readily available. In anticipation of possible bleeding, blood and blood products were kept ready, and the vascular surgeon and anaesthetist were well-prepared to handle any major hemorrhage. Labor progressed spontaneously. The extensive vulvar and inner thigh varicosities in active labor are shown in Figure *2*.



FIGURE 2: Extensive vulvar and inner thigh varicosities in active labor

During the second stage, manual perineal support was used to minimize abrupt stretching of the varicosities. An episiotomy was avoided to prevent trauma to the engorged veins, instead allowing for gradual perineal stretching, and care was taken for controlled delivery of the head in between contractions. The patient successfully delivered a healthy male infant (3.3 kg) without any complications. Importantly, none of the VVs ruptured or bled and the estimated blood loss was around 300 ml. A small, first-degree perineal tear, remote from the varices, occurred, which was repaired with a few stitches.

Immediately following the delivery of the baby, the varicosities decreased significantly (Figure *3*), and by postpartum day three, there were hardly any visible varices (Figure *4*).



FIGURE 3: Appearance of the vulva immediately after delivery of the baby



FIGURE 4: Appearance of the vulva on Day 3 of puerperium

At the six-week follow-up, both her VVs and leg varices had nearly resolved, and she had resumed normal activities.

Discussion

VVs in pregnancy highlight an interplay between vascular changes and obstetric decision-making. These vascular changes occur because of a combination of hormonal and mechanical factors: pregnancy-related increases in estrogen and progesterone lead to venous dilation, and the growing uterus compresses the inferior vena cava and pelvic veins, hindering blood return [2]. Additionally, insufficiency in the pelvic venous circulation due to absent or incompetent ovarian and internal iliac veins can contribute to the development of VVs [2]. Also, women with Klippel-Trenaunay syndrome, a congenital vascular disorder, often present with VVs [3]. Other risk factors include maternal age, genetic predisposition, and prolonged standing [4].

Clinically, most VVs are asymptomatic or cause mild discomfort such as pressure or a sensation of fullness. However, in severe cases, they can lead to pain, pruritus, or difficulty walking [2,4]. VVs present as soft, bluish, compressible masses on the vulva, worsening as pregnancy advances. Conservative management, including pelvic support garments, rest, and leg elevation, can provide symptom relief during pregnancy [5]. While the appearance may be concerning, mild to moderate VVs do not typically contraindicate vaginal

delivery. These veins are generally low-pressure, and even if minor bleeding occurs, it is usually manageable.

In the presence of severe VVs due to the fear of possible life-threatening bleeding from ruptured varices, CS was preferred. In the systematic review by Giannella et al., 6 out of 11 pregnancies complicated by VVs were delivered by CS, and in 70% (4/6) of them, the indication was VVs. The literature reports both successful vaginal births and instances of significant hemorrhage from variceal rupture [2]. A case of severe complication following a vaginal delivery, reported in 1951, was after prophylactic forceps application and episiotomy [6]. Though preferred by many, there are reports of complications with CS as well [2].

Given the low but real risk of bleeding, management should be individualized, weighing the potential risks of variceal hemorrhage against the surgical risks of cesarean delivery. A multidisciplinary approach, involving obstetricians, anesthesiologists, and a vascular surgeon, is often recommended. Delivery should occur in a facility equipped to handle hemorrhagic emergencies, with anesthesia and surgical support. For vaginal delivery, careful intrapartum management is the key. Techniques such as manual perineal support in the second stage of labor, controlled delivery of the fetal head, and avoiding unnecessary episiotomy over varicose areas help minimize trauma [3].

Judicious multidisciplinary planning and meticulous intrapartum care enabled us to achieve successful vaginal delivery even in the presence of extensive VVs without any complication.

Following delivery, even the prominent varices that appear alarming typically regress spontaneously within four to six weeks postpartum, as was seen in our case as well, and severe complications are rare [2].

Conclusions

In most instances of VVs, CS had been chosen over vaginal delivery to avoid the potential risk of hemorrhagic complications. VVs, even the most extensive ones, however, do not always necessitate a cesarean delivery. With a multidisciplinary approach and careful labor management, vaginal delivery can be a safe and reasonable option, provided it is undertaken in a setting well-equipped to manage any hemorrhagic complications. The key steps during vaginal delivery involve manual perineal support during the second stage of labor, avoidance of unnecessary episiotomy over the areas of varicosities, and controlled delivery of the fetal head. In the absence of any clear guidelines, the decision regarding the best mode of delivery should, however, not be guided by case reports of a few successful vaginal deliveries but has to be individualized based on the available infrastructure and presence of skilled specialists.

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

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Disclosures

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References

1. Bell D, Kane PB, Liang S, Conway C, Tornos C: Vulvar varices. An uncommon entity in surgical pathology.

Int J Gynecol Pathol. 2007, 26:99-101. 10.1097/01.pgp.0000215304.62771.19

2. Giannella L, Montanari M, Delli Carpini G, Di Giuseppe J, Ciavattini A: Huge vulvar varicosities in pregnancy: case report and systematic review. J Int Med Res. 2022, 50:3000605221097764. 10.1177/03000605221097764
3. Furuta N, Kondoh E, Yamada S, Kawasaki K, Ueda A, Mogami H, Konishi I: Vaginal delivery in the presence of huge vulvar varicosities: a case report with MRI evaluation. Eur J Obstet Gynecol Reprod Biol. 2013, 167:127-31. 10.1016/j.ejogrb.2012.11.024
4. Papoutsis D, Haefner HK: A case of extensive varicosities of the vulva in a term pregnancy . Hippokratia. 2015, 19:376.
5. Gavrilov SG: Vulvar varicosities: diagnosis, treatment, and prevention. Int J Womens Health. 2017, 9:463-75. 10.2147/IJWH.S126165
6. Reich WJ, Nechtow MJ: Rupture of a vulvar varix with massive and extensive hemorrhage following a normal delivery. Am J Obstet Gynecol. 1951, 61:1374-5. 10.1016/0002-9378(51)90927-1