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Massive Unilateral Vulvar Varicosities and Successful Vaginal Delivery in a Primigravida: A Case Report

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Abstract

Vulvar varicosities are a rare manifestation of pelvic venous insufficiency, most often observed during pregnancy and typically bilateral. The occurrence of massive unilateral vulvar varicosities is exceptional and may pose a clinical challenge because of the potential risk of bleeding, pain, and functional impairment. We report the case of a 19-year-old primigravida at 39 weeks of gestation presenting with massive right-sided unilateral vulvar varicosities, who delivered vaginally under close monitoring. The postpartum course was favorable, with spontaneous regression of the vulvar swelling. To our knowledge, this is the first case of its kind reported in the Democratic Republic of the Congo (DRC). This case highlights the feasibility of vaginal delivery in such situations and helps expand the literature on this rare condition in the African context.

Keywords

Vulvar Varices, Pregnancy, Vaginal Delivery, Postpartum, Democratic Republic of the Congo

1. Introduction

Vulvar varicosities during pregnancy represent a rare but clinically significant complication, with an estimated prevalence of 4% - 10% among pregnant women [1]. They result from a combination of pathophysiological mechanisms, including pregnancy-related hypervolemia, mechanical compression of the pelvic veins by

the gravid uterus, and the vasodilatory effects of pregnancy hormones, particularly progesterone [2].

Clinically, they manifest as vulvovaginal swelling, pelvic pain, or discomfort while walking. They are most often bilateral; unilateral, large-scale forms remain exceptional [3]. These atypical presentations pose a particular challenge at the time of delivery, because the risk of rupture and hemorrhage may lead some obstetricians to recommend prophylactic cesarean section, although several cases reported in the literature have demonstrated the feasibility of uncomplicated vaginal delivery [4].

In this context, we report an original case of massive, unilateral vulvar varices in a term primigravida who delivered vaginally without complications, followed by a dramatic postpartum regression. To our knowledge, this is the first documented case in the Democratic Republic of the Congo (DRC), which lends particular value to this observation.

2. Case Presentation

The patient was a 19-year-old primigravida at 39 weeks of gestation who presented to the emergency department with lumbopubic pain associated with vulvar swelling that had been progressing for approximately two months. She reported substantial difficulty walking. Her medical history was unremarkable, and she had no prior history of varicose veins or venous disease.

On admission, vital signs were within normal limits. Abdominal examination showed an enlarged gravid uterus in cephalic presentation, with a fundal height of 32 cm and a small transverse diameter. Fetal heart sounds were regular at 145 beats per minute.

Examination of the vulva revealed massive right-sided unilateral varicosities involving the labium majus, labium minus, and clitoris (**Figure 1**). On palpation, the swelling was soft, non-tender, and without inflammatory signs. Vaginal examination showed a midline cervix, 100% effaced and dilated to 4 cm, with a cephalic presentation of the engaged fetal head and intact membranes. The pelvis was considered adequate for vaginal delivery.

The completed clinical evaluations revealed the following findings: the blood count showed no abnormalities; the patient was classified as having blood type B Rh positive; the ultrasound examination demonstrated unilateral reflux in the left great saphenous vein; Doppler imaging confirmed the presence of a tumor mass; based on the Doppler ultrasound results, we diagnosed varicose veins at the vulvar level.

Following a multidisciplinary discussion, it was decided to attempt a vaginal delivery under close monitoring. Pre-anesthetic visit examination was conducted in preparation for a cesarean section due to hemorrhage during labor, given the absence of obstetric complications and an adequate pelvis. Four hours after admission, the patient delivered vaginally a male newborn weighing 3200 g, with Apgar scores of 9/10/10. In the absence of an episiotomy or any soft tissue injury,

the amount of blood loss in the immediate postpartum period was estimated to be approximately 350 ml.

The postpartum course was marked by a dramatic regression of vulvar varicosities over several days (Figure 2). Maternal and neonatal monitoring revealed no complications. No specific treatment was required for the varicosities, and the patient was counseled regarding postpartum follow-up and venous surveillance.

On the first day after delivery, we observed rapid regression; one week later, the varicocele had decreased by half (Figure 3). By week 3, the varicocele had completely regressed (Figure 4).

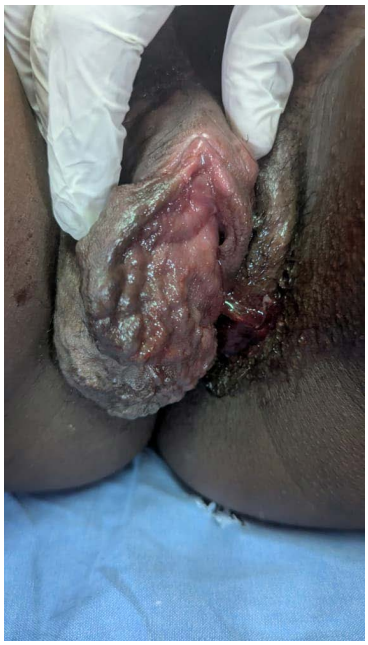

Figure 1. Image of unilateral vulvar varices before childbirth.

Figure 2. Image after the expulsion of the fetus.

Figure 3. One week after giving birth.

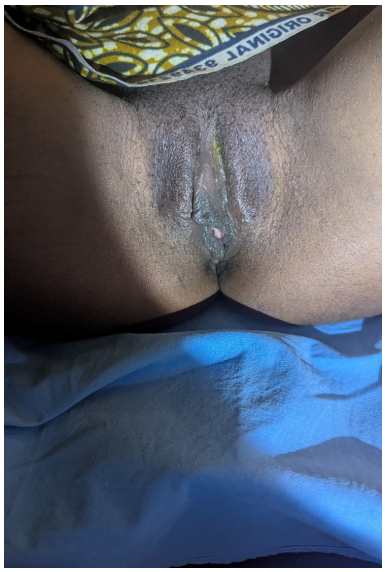

Figure 4. Three weeks after delivery.

3. Discussion

Vulvar varicosities are rare and often underrecognized, which can lead to delayed diagnosis and undue patient anxiety. Their occurrence during pregnancy is attributed to physiological hypervolemia, increased cardiac output, vasodilation induced by gestational hormones, and mechanical compression of the pelvic veins by the gravid uterus [1] [2].

Most cases described in the literature involve bilateral varices, and the presence of massive unilateral varices, as observed in our case, is exceptional [3] [4]. Clinically, they present as a soft swelling, sometimes painless, associated with a sensation of heaviness or pruritus, and may cause substantial functional discomfort. The literature rarely reports cases of massive vulvar varices leading to obstetric difficulties; however, some authors recommend caesarean delivery as a precaution

given the risk of hemorrhage [5].

In our observation, several features make this case unique: the massive unilateral presentation, its occurrence in a primigravida, the absence of hemorrhagic complications, and a successful vaginal delivery under close monitoring. This favorable outcome confirms that vaginal delivery can be a safe option when the pelvis is adequate, and the patient is closely monitored, consistent with Kumar and Madhavamurthy [2] and Gavrilov [3], who emphasize individualized assessment and careful surveillance.

The marked regression of varicose veins after childbirth illustrates the mechanical and hormonal contributions to their pathophysiology. Relief of uterine venous compression and the postpartum decline in hormone levels account for this rapid regression, as reported by Giannella *et al.* [4] and Ganeshan *et al.* [1].

The originality of this case lies in the fact that it is the first report of massive unilateral vulvar varices in a term pregnancy in the DRC. This report enriches the local and international scientific literature, highlights the feasibility of safe vaginal delivery under appropriate conditions, and underscores the importance of a multidisciplinary approach to assess obstetric and venous risks.

4. Conclusion

Massive unilateral vulvar varicosities during pregnancy are rare and may pose a clinical challenge. This case shows that vaginal delivery can be safely considered under close monitoring, with appropriate postpartum follow-up. The spontaneous regression of varicosities after delivery confirms their transient, pregnancy-related nature. This is the first case reported in the DRC, thereby enriching the literature on this exceptional condition and highlighting the need for individualized, multidisciplinary management.

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Author Contributions

NBM and AKJ: Conception and design of the study; DJ, BBJ, and BCA: Performed the literature research; NBM and AKJ: Writing the draft; ON: Supervised the redaction. All authors reviewed and approved the manuscript.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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