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Vaginal varicose veins in advanced pregnancy: a rare occurrence

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Abstract

Varicose veins are common in pregnancy due to hormonal influences and increased venous pressure; however, vaginal varicosities are a rare and often underreported manifestation. Their presence poses diagnostic challenges and may influence obstetric management because of the potential risk of hemorrhage during vaginal delivery. We present a case of vaginal varicosity in a 32year old G3P2+0, 2 alive. She presented with complain of painless vaginal swelling noticed incidentally at 17 weeks of gestation. The swelling persisted then remained stable. She also had varicose veins on her lower limbs bilaterally. Vaginal examination revealed a bluish soft, non-tender, compressible swellings involving the vaginal walls. Doppler Ultrasound Scan revealed a mass in the vaginal walls with high flow on doppler interrogation/augmentation and Valsalva maneuver. An assessment of vaginal varicosity was made. She was counseled on the mode of delivery and had elective caesarean section on account of vaginal varicose veins and coexisting breech presentation at term. The swelling started regressing after delivery and by 6 weeks post-partum it had resolved completely.

Key Words: vagina, varicose-veins, pregnancy

Introduction

Varicose veins are seen in 10-15% of pregnant women and are common especially in the second trimester of pregnancy[1]. They are common in the legs but may develop over the vulva and infrequently over the vagina. Prolonged standing worsens varicose veins and can be relieved with rest. Vulva varices are seen in 4% of women,[1] most being secondary to pregnancy and diseases such as Klippel-Trenaunay-Weber syndrome or pelvic congestion syndrome.[1] Vaginal varices are reported less frequently.[2] Vaginal varices in non-pregnant women rarely cause any threats. However, with pregnancy, the spontaneous laceration of these varices can cause massive blood loss.[3] Varicose veins during pregnancy affect up to 15% of women population.[4] When large vaginal varices rupture and massive hemorrhage ensues, achieving hemostasis can be difficult.

Vaginal varices are very infrequent and mostly asymptomatic.[1] Some are associated with a sense of heaviness or spontaneous vaginal bleeding. Peculiar to varicose veins in pregnancy are their appearance, precocity, intensity of development, uncommon symptoms and rapidity of regression in the puerperium.[5] The option of delivery in a cephalic term pregnancy especially with such level of engorged veins in the vagina is not so clear cut. However, there are reported cases of massive haemorrhage from ruptured vaginal varicose veins

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following vaginal delivery[3]. The co-existing breech presentation at term with risk of variceal rupture during vaginal breech delivery indicated elective caesarean section.

Case report

We report a case of a 34year old G4P2+1, 2 alive whose last menstrual period (LMP) was 09/08/22 and Expected Date of Delivery (EDD) was on 16/05/23. She booked for antenatal care (ANC) on 19/01/23 at 23weeks 2days with no complaint. Her booking parameters were all normal. Her booking investigations were all normal except her hemoglobin genotype of "AS" (her husband is Hb AA). In her 3rd antenatal follow up visit, she complained of 3months history of a painless swelling on the lower part of the right side of her vagina duration. She first noticed the swelling as fullness in her vagina that protruded during squatting. There was no associated discomfort during walking. There was no similar swelling noticed in other parts of the body except prominent veins on both legs. She abstained from sexual intercourse after the swelling was noticed. She did not have family history of varicose veins. On examination, her general condition was stable. The vital signs were stable. Obstetric examination revealed a symphysio-fundal height that was compatible with her gestational age (GA). There was a singleton fetus in longitudinal lie with breech presentation. The fetal heart tones were present. Vaginal examination revealed bluish/pinkish swellings on the anterior vaginal wall measuring 2.5cm by 2.5cm and 1.5cm by 1.5cm on the posterior vaginal wall. The swellings were soft, vascular, non-tender like sac of worms

An assessment of vaginal varicosities was made. Doppler ultrasound scan of the vagina revealed a mass in the anterior and posterior vaginal walls which appear bluish about 4.36cm by 2.6cm in dimension. It showed high blood flow on doppler interrogation and showed augmentation on Valsalva maneuver. There was no mass on the vulva.

An impression of vaginal varicosities was made. She was GQQcounseled on the diagnosis. She continued her antenatal care follow up, the mass did not regress and the fetus remained in breech presentation. She was counseled for elective caesarean section due to risk of hemorrhage if the

FIGURE 1: Vaginal varicose veins

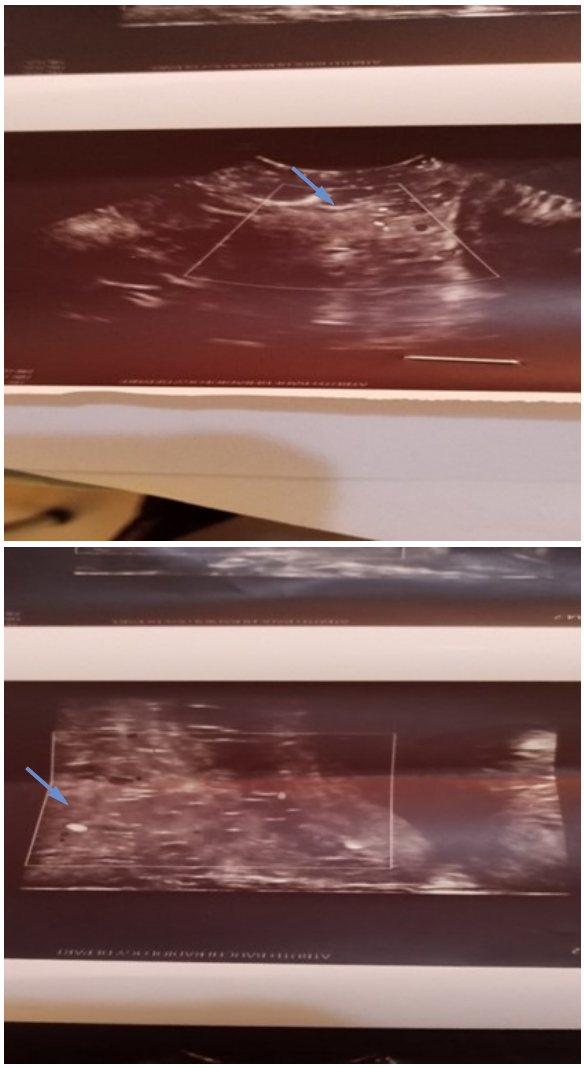

FIGURE 2: Doppler images of the vaginal varicose veins

varicose veins rupture during delivery especially with maneuvers during assisted vaginal breech delivery. She had an elective caesarean section at 38weeks and was delivered of a live female baby who weighed 3.3kg with APGAR scores of 8 and 9 at the 1st and 5respectively.

FIGURE 3: Breech extraction of the baby during Caesarean Section

The placenta was fundal. The estimated blood loss was 700 ml (due to difficulty securing hemostasis as a result of a prominent tortious vessel on the left lower uterine incision). She had one unit of blood transfused. The patient did well and was discharged on the 3rd post-operative day. The post-operative period was uneventful. She was seen at 2 weeks postpartum and the swelling was noticed to have decreased in size. Subsequent visit at 6 weeks showed no abnormality and the varices had disappeared with no traces.

Discussion

Vaginal varices are uncommon in pregnancy.[3] The factors that contribute to their development in pregnancy includes; venous distension from increase in plasma volume, increase in intra-abdominal pressure, hormonal changes in pregnancy and compression of the inferior vena cava and pelvic veins by the gravid uterus.[6] Family history of varicose veins may also be a risk factor.[7] Multivariate analysis has shown that pregnant women who have family history of varicose veins have 3.56 times likelihood of having varicose veins during pregnancy.[7] However, this patient did not have a family history of varicose veins. The theory of mechanical compression explains why vulvar/vaginal varicosity occur mostly during the third trimester, although this patient noticed the swelling in late second trimester. Vascular scans (Duplex and Phlebography) have shown that the speed of blood flow within femoral veins decreases progressively in proportion to the increase in uterine volume. This reduction has been shown to reach 50% in the third trimester especially in right lateral decubitus or dorsal position.

Varicose veins on vaginal wall are infrequent when compared to vulvar varicose veins. Perineal varices usually appear during the last months of pregnancy and they regress spontaneously following delivery.[8] Significant percentages of vaginal varices are asymptomatic and may not be detected in the early pregnancy, as in the index case. Few are associated with severe local discomfort and sometimes spontaneous vaginal bleeding; A case of vaginal varicose veins in pregnancy was reported with fetal death as a result of significant maternal bleeding of a ruptured variceal vein seen as a hole in a localized varicose vein.[9] This patient in the index case report had mild discomfort and did not experience spontaneous vaginal bleeding. It is important to recognize the possibility of associated anatomical or pathological diseases. This may include leg varices, venous malformation of labia, clitoral area or vagina with or without capillary and venous malformations of limbs or trunk (Klippel-Trenaunay Syndrome).[10] The patient in the index case has coexisting varicose veins on her lower limbs.

The reported case however with extensive varices of the vagina had an elective cesarean section performed for fear of rupture during a vaginal breech delivery. Kikuchi et al[3] reported great challenge with securing surgical hemostasis from multiple lacerated vaginal varicose veins that arise following vaginal delivery. In the said case, it took up to 48 days postpartum to address the bleeding by packing the vagina with risk of increased morbidity

and mortality in the parturient following vaginal delivery.[3] As a result of this unpredictable and risk of life-threatening hemorrhage from ruptured rare vaginal varices following vaginal delivery, caesarean section was chosen as a safer mode of delivery in our patient with co-existing breech presentation to avoid risk of maternal morbidity and mortality.

Conclusion

Vaginal varicosities in pregnancy are rare and may be asymptomatic but carry potential risks during vaginal delivery. Early recognition and individualized delivery planning are essential to prevent complications. This case highlights the importance of thorough genital examination in pregnancy and supports caesarean delivery as a safe option in selected cases.

Informed consent: Informed consent was obtained from the patient for publication of this case report and accompanying images

Conflict of interest: There is no conflict of interest.

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