



Vasa Previa with short uterine cervix : A case report

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Abstract

Background

Diagnosis of Vasa Previa and short cervix is a rare gynecological condition, and it can occur even without any placental malposition. Ultrasonography is one of the most useful and accessible devices for detecting this condition and to confirm such diagnosis.

Case Presentation

A 31years old G3P0 woman presented with short cervical length at 20th week of gestation. Vasa previa measuring 14 cm was diagnosed at 22nd week of gestation. At the 30th week, she delivered a baby girl weighing 1440grams.Both mother and child are well and healthy.

Conclusion: *Timely detection of vasa previa decreases the chances of neonatal mortality. There is need for setting up proper guidelines at the national level for raising awareness about the complications and prompt diagnosis of vasa previaspecially of associated with other obstetrical complications.*

Keywords: *Vasa previa, Fetal distress, cervical length, risk factors, complications, systematic review*



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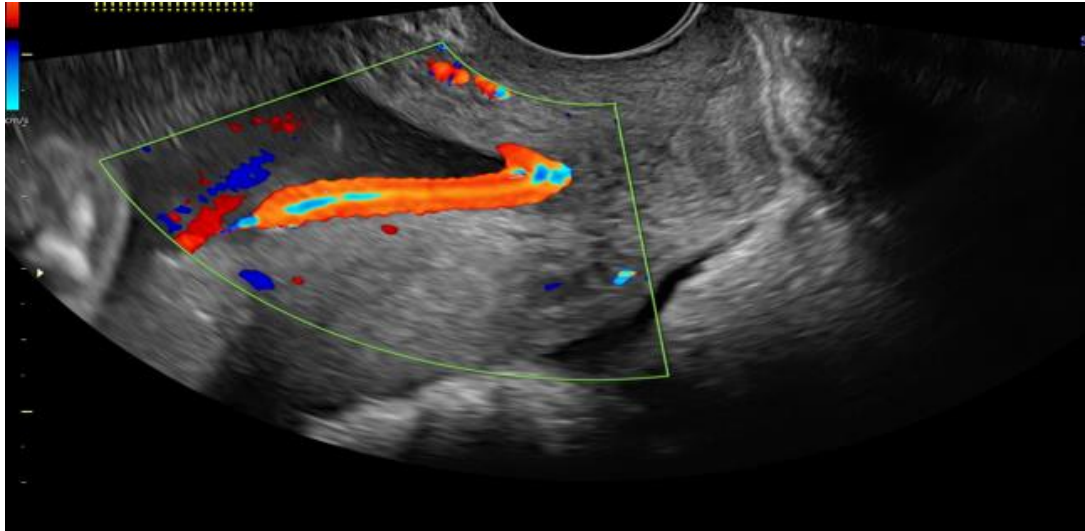
Background:

Vasa Previa is a medical condition in which the blood vessels remain unprotected by the umbilical tissue present within the membranes while passing from fetus to placenta running close to the internal OS (Datta, Babu, Mitra, & Patil, 2016). Vasa Previa being a rare complication is often missed at the routine ultrasound examination putting the fetus at risk of fetal distress and hemorrhage due to vessel rupture (Kulkarni et al., 2018). The estimated prevalence of vasa previa 0.6% per 1000 deliveries (Ruiter et al., 2016) undetected vasa previa followed by vaginal delivery decreases the fetal chances of survival to less than 50% (Villani, Pavalagantharajah, & D'Souza, 2020) (Pavalagantharajah, Villani, & D'Souza, 2020). The succenturiate/bilobate placenta, umbilical cord's velamentous insertion, placenta previa, multiple pregnancies, and the post in vitro fertilization gestations are all risk factors for vasa previa (Sinkey, Odibo, & Dashe, 2015). If short cervical length is depicted on sonography along with vasa previa then it calls for the emergency delivery of the fetus (Maymon et al., 2018). We present a unique case of vasa previa along with a short cervix that is successfully delivered at our hospital.

Case Presentation

A 31 year old gravida 3 para 0 presented to the hospital for a routine antenatal checkup. She was diagnosed with a cervical length of 1.9cm at the 20th week of gestation. Patient was referred to the Fetal Assessment Unit, cervical length found to be 1.5cm on the second measurement. Patient counseled about the findings and given instructions when to present to hospital.

Image 1: Vasa Previa GA 21 weeks+ 6



Patient remained stable for almost 2 weeks .However, on a subsequent follow up visit at 21 weeks and 6 days gestation a new diagnosis of Vasa previawas made. A very large fetal vein traversing into the funnel of the amnion in the upper cervix and crossing directly over the internal os. The combined findings of the vasa previa along with cervical shortening pointed towards a life-threatening condition for both mother and fetus. Risks of fetal distress and hemorrhage due to rupture of membranes or preterm labour . The patient was prescribed Prometrium along with close surveillance of cervical length was done.

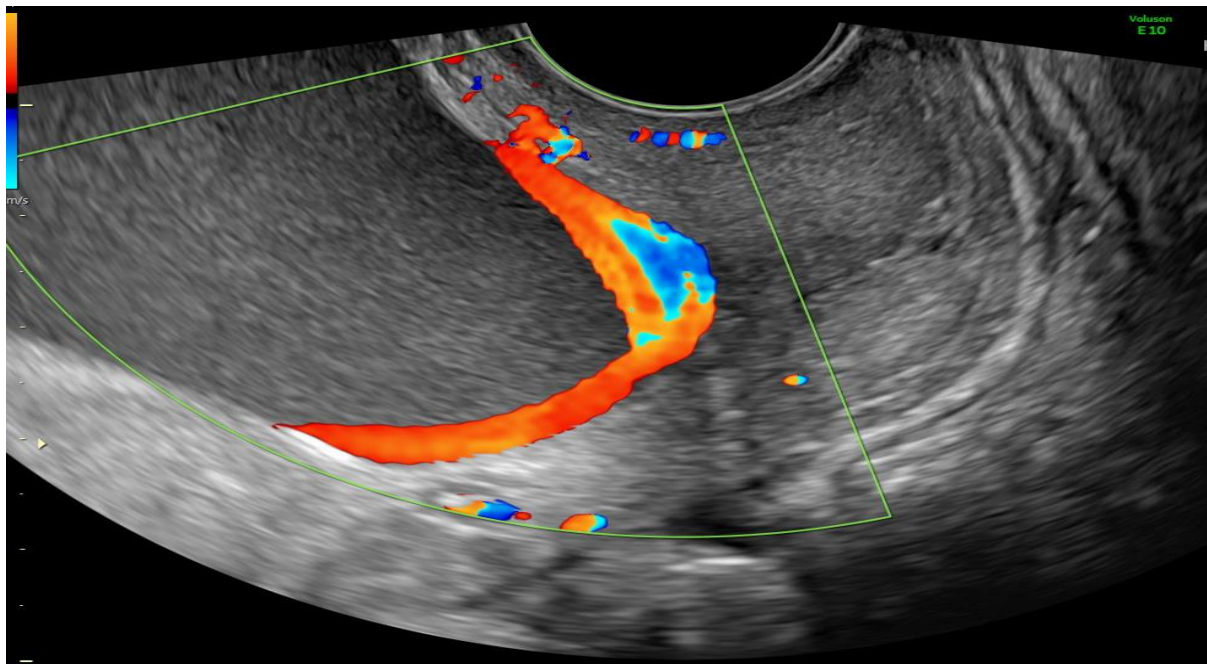


Image 2: Vasa Previa 28 +6 weeks

The image shows the vasa previa at 28 weeks and 6 days, fortunately the cervical length remained stable, and discussion about timing of delivery started around 28 weeks especially in the absence of cervical change on ultrasound surveillance.

We reviewed the Canadian Neonatal Network data on morbidity and mortality and found a plateauing of risk from 29 weeks onward, and there was very little interval gain in terms of the risk of perinatal morbidity and mortality. However, given the stable cervical length, the couple decided to prolong gestation understanding risks and benefits. At this point, a decision was made to monitor as an inpatient and to initiate Corticosteroids.



Image 3: Cervical Length at 29+5

The image shows the cervical length at 29 weeks and 5 days, further cervical shortening was observed at 1.2 cm (Compare to a stable length between 1.5 and 1.7 cm on prior weeks. With this finding, a decision was made to proceed with delivery. A lower segment cesarean section performed with no immediate complications. A single live-born female infant was delivered weighing 1440 grams. Apgar score were 8 and 9, and umbilical artery pH was 7.33. The placenta was sent to pathology. On pathology, a prominent fetal vein measuring 14 cm in length and 0.3cm diameter was noted to be traversing the amnion. This was the segment of the fetal vein that was noted to be traversing right over the internal os detected on fetal sonography. Fortunately, both



mother and the newborn did well postoperatively . The newborn remained in the hospital for 2 months in the NICU and discharge in stable condition after.

Conclusions:

Vasa previa is an uncommon cause of antepartum hemorrhage and is associated with the risk of rupture of fetal membranes resulting in fetal exsanguination. It's an anomaly in which there is the velamentous insertion of the low-lying placenta with the vessels traversing the lower uterine segment rite in front of the fetal presenting part(K. O. Oyelese, Turner, Lees, & Campbell, 1999). Prenatal diagnosis is one of the best ways of timely diagnosis of vasa previa. Heavy vaginal bleeding along with fetal distress demands the emergency caesarian due to a life-threatening situation for the fetus(Aoki, Obata, Odagami, Miyagi, & Aoki, 2019). YinkaOyelese et al' stated that prenatal detection of vasa previa increases the newborn survival chances to about 97%(Y. Oyelese et al., 2004). Hasegawa and his colleagues reported that asymptomatic patients with vasa previa are routinely managed at the outdoor department if there no evidence of cervical shortening on ultrasonography with no signs of hemorrhage or preterm uterine activity(Hasegawa, Arakaki, Ichizuka, &Sekizawa, 2015).

In our case, the patient was delivered electively through a lower segment caesarian section after precise detection of the course of fetal vessels as a large fetal vein was traversing through the upper cervix. In our patient, the presence of vasa previa along with cervical shortening was observed on ultrasonography. Hence, it is concluded that although vasa previa being a rare but extremely life-threatening complication has to be timely diagnosed on prenatal diagnosis. The prenatal confirmation of placenta previa along detection of cord vessels course contributes towards safe and health delivery of the baby.

Nowadays, antenatal screening of pregnant women for vasa previa is being done using the Transvaginal ultrasound along with color doppler. There is a need for setting up national organizations to heighten the awareness of vasa previa among the healthcare professionals and public.



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