PERINATAL JOURNAL

Case(s)
Perinatal Journal 2024;32(2):115-116

A happy ending of a velamentous cord insertion

Paula Granja[1]

[1]Hospital da Luz , Clínica de Amarante, Department of Obstetric, Amarante, Portugal

Abstract

Objective: Velamentous cord insertion is an umbilical cord attachment to the membranes surrounding the placenta instead of the central mass. Velamentous cord insertion was associated with adverse perinatal outcomes, most notably pre-term birth and emergency caesarean section in singletons pregnancies and perinatal mortality in twins.

Case(s): This is a clinical case of a low-risk pregnant woman at 24 weeks of gestation and suspected of having velamentous cord insertion. She did several scans and colour doppler imaging enhances identification of the vessels. The suspicion was in the 12th week of pregnancy. A vaginal birth took place in the 39th week of pregnancy without complications.

Conclusion: Although velamentous cord insertion was suspect before birth, many of its sequelae are only identified in the intrapartum period. The sooner it is suspect and therefore monitored, the better the prognosis.

Keywords: Ultrasonography, doppler, colour, umbilical cord abnormalities

Introduction

Velamentous cord insertion (VCI) is an umbilical cord attachment to the membranes surrounding the placenta instead of the central mass. Because of the lack of protection from Wharton´s jelly, these vessels are prone to compression and rupture, especially when they are located near the cervical ostium (vasa previa), which sometimes coincides.[1,2] The estimated incidence of VCI was 0,4%-11% in singleton pregnancies, with higher incidence in twin pregnancies (1,6%-40%).[1]

VCI was associated with adverse perinatal outcomes, most notably pre-term birth and emergency caesarean section in singleton pregnancies, and perinatal mortality in twins; however, the prenatal diagnosis is based upon the presence of characteristic sonographic findings (membranous umbilical vessels) at the placental cord insertion, this becomes more difficult with advancing gestation.[1,2]

Case(s)

A 32 year old woman, gravid 2, para 1, with a 24 weeks low-risk gestation came to our clinic to have a routine transabdominal ultrasonography with a suspicion velamentous cord insertion (VCI). The fetal growth was normal, the cord seemed to end some centimetres from the placenta, at which point the umbilical vessels separate from each other and cross between the amnio and chorion before connecting to the subchorionic vessels of the placenta (Figure 1), located on the anterior wall. Colour doppler imaging enhances identification of the vessels.[2,4]

Correspondence: Paula Granja, Hospital da Luz , Clínica de Amarante, Department of Obstetric, Amarante, Portugal, **e-mail:** paulagranja59@hotmail.com, **Received:** April 27, 2024, **Accepted:** May 4, 2024

How to cite this article: Granja P. A happy ending of a velamentous cord insertion. Perinatal Journal 2024;32(2):115-116 DOI: 10.59215/rn.24.0322004
ORCID ID: P Granja 0009-0004-4287-0538

CETUS Publishing

Fig 1. VCI suspicion in 3rd Trimester of gestation

The suspicion of VCI was done at 12 weeks gestation scan when the site of placental cord insertion seemed localized at the edge of the placental disk (Figure 2).

Fig 2. 1st Trimester VCI suspicion

She was warned for adverse perinatal outcome (fetal growth restriction, need for caesarean delivery, intrapartum and postpartum bleeding) and was advised pregnancy monitoring more closely.[2-5]

Discussion

Fetal growth was normal and compatible with 12th weeks. She did several scans and the suspicion of VCI was strong in all of them, especially with the use of colour doppler. This clinical information was very important to the clinical team when she was admitted to the hospital in labour at 39th weeks gestation. A vaginal delivery it happened. A female infant was delivered, weighing 3100gr, with Apgar scores of 8 and 9 at 1st and 5th min.

There was no record of neonatal or obstetric complications. After giving birth to the baby, the mother was instructed to expel the placenta, which according to her was like having another birth. A small placenta with VCI were observed (Figure 3). There are no data from large or controlled studies on which to base management recommendations.[1,3]

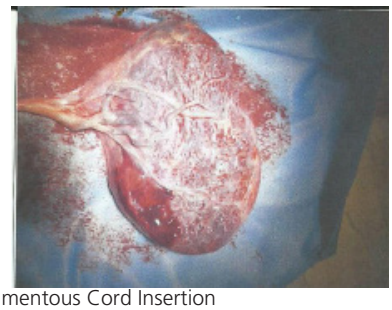

Fig 3. Velamentous Cord Insertion

Conclusion

This case was approached with care in its surveillance, although VCI was suspected before birth, many of its sequelae are only identified in the intrapartum period. Its definitive diagnosis is made by local examination of the placenta, cord and membranes after birth and can have a serious outcome. The sooner it is suspected and therefore monitored, the better the prognosis.

References

1. Buchanan-Hughes A, Bobrowska A, Visintin C, Attilakos G, Marshall Velamentous cord insertion: results from a rapid review of incidence, risk factors, adverse outcomes and screening. Syst Rev 9, Article number :147. 2020. [PubMed][CrossRef]
2. Rocha J, Carvalho J, Costa F, Meireles I, Carmo O; Velamentous Cord Insertion in a Singleton Pregnancy. An Obscure Cause of Emergency Cesarean - A Case Report. Case Reports in Obstetrics and Gynaecology/Volume 2012/ Article ID 308206.[PubMed][CrossRef]
3. Wikipedia contributors, Velamentous cord insertion, Wikipedia, The Free Enyclopedia, 2023; PageVersionID:1183934504. https://en.wikipedia.org/w/index.php?title=Velamentous_cord_insertion&oldid=1183934504
4. Sepulveda W, Rojas I, Robert J A, Schnapp C,Alcalde J L. Prenatal detection of velamentous insertion of the umbilical cord : a prospective color Doppler ultrasound study. Ultrasound Obstet Gynecol.2003 Jun; 21(6):564-9. [PubMed][CrossRef]
5. Siargkas A MSc, Tsakiridis I,PhD, Pachi C,MSc, Mamopoulos A, PhD, Athanasiadis A, PhD, Dagklis T, PhD; Impact of velamentous cord insertion on perinatal outcomes: a systematic review and meta-analysis; American Journal of Obstetrics and Gynecology - Maternal-Fetal Medicine. 2022; volume 5, issue 2. [PubMed][CrossRef]