

EP05.37: Segmental Umbilical Cord Atresia and Bifidity with Velamentous Umbilical Cord Insertion A Rare Association

FAKIH Chadi, MD^{1,2,3}, SALME Tara Maria MD², FAKIH Ahmad³, FAKIH Zeinab³, MOURAD Youmna MD³, FAKIH Fadi MD^{3,4}

1-Department of Obstetrics and Gynecology, University of Balamand, Beirut, Lebanon

2-Department of Obstetrics and Gynecology, Mount Lebanon Hospital University Medical Center, MLHUMC, Beirut, Lebanon

3-AL HADI ivf center, Beirut Lebanon

4- Centre hospitaliers moulins Yzeure



Introduction

- **Velamentous cord insertion (VCI)** is associated with unprotected vessels that lack Wharton's jelly and are thus vulnerable to compression, rupture, and hemorrhage.
- **VCI** is a known risk factor for adverse perinatal outcomes including fetal growth restriction, prematurity, emergency cesarean, and stillbirth.
- **VCI** is often associated with other placental anomalies, such as vasa previa, single umbilical artery, lobed placenta, and placenta previa, which further escalate risks.

Objective

To our knowledge, our study represents the first reported case of **intra-uterine fetal demise IUFD** resulting from the combined occurrence of **Velamentous cord insertion VCI** and **segmental umbilical cord atresia SUCA**, highlighting their synergism to a tragic outcome.

Case Report

- A 36-year-old primigravida, presented with a 24-hour history of absent fetal movements. Ultrasound in the delivery ward confirmed intrauterine fetal demise. Previous antenatal scans had not documented any cord or placental abnormalities.
- Gross placental examination after delivery revealed a **velamentous cord insertion (VCI)**. In addition, the umbilical cord demonstrated a **segmental atresia**, with abrupt narrowing and fibrotic obliteration, accompanied by **bifidity** distal to the atretic portion.

Discussion

- **VCI** has been described with anomalies such as vasa previa or single umbilical artery, its **coexistence** with **segmental cord atresia** and **bifidity** appears exceptionally **rare** and, to our knowledge, unreported. In this case, the additional vascular interruption likely intensified the circulatory compromise of VCI, leading to sudden intrauterine demise.
- **VCI** may be missed during routine ultrasound, especially late in pregnancy. Incorporating color Doppler may improve detection and should be considered whenever cord abnormalities are suspected.

Conclusion

This case underscores the need for meticulous evaluation of cord insertion and structure during prenatal imaging, as early recognition may improve the outcome

