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A RARE CASE OF SINGLE UMBILICAL ARTERY ASSOCIATED WITH IMPERFORATE ANUS IN A TERM PREGNANCY

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ABSTRACT

Single umbilical artery (SUA) is the most common umbilical cord abnormality and is associated with various congenital anomalies, particularly involving the cardiovascular, renal, and gastrointestinal systems. We report a case of a 26-year-old gravida 2 para 1 woman with a previous cesarean section, diagnosed antenatally with isolated SUA at 20 weeks of gestation. No additional anomalies were detected on detailed anomaly scan. At 38 weeks and 2 days, she underwent elective cesarean section in view of previous cesrean section and delivered a 2.8 kg male neonate. Postnatal examination revealed imperforate anus, requiring colostomy on day 3 of life. This case highlights that even when SUA appears isolated antenatally, associated anomalies may still be present, emphasizing the importance of careful neonatal examination. SUA although it may present as an isolated finding on antenatal ultrasonography, the risk of associated structural abnormalities cannot be completely excluded. **Summary:** We report a case of a 26-year-old gravida 2 woman with a previous cesarean section, in whom SUA was detected on a routine anomaly scan at 20 weeks of gestation without any additional abnormalities. She underwent an elective cesarean section at term and delivere a healthy male neonate. However, postnatal examination revealed imperforate anus, requiring surgical intervention in the form of colostomy. This case highlights the limitation of antenatal imaging in detecting certain anomalies and emphasizes the importance of thorough neonatal examination even when prenatal findings appear reassuring. Early recognition and timely management are essential to improve neonatal outcomes.

KEYWORDS

Single umbilical artery, Imperforate anus,Congenital anomaly,Antenatal diagnosis,Neonatal examination

INTRODUCTION

Single umbilical artery (SUA) is identified in approximately 0.5–1% of singleton pregnancies and is considered the most common abnormality of the umbilical cord (Rittler M & Paz JE, 1998; Murphy-Kaulbeck L & Dodds L, 2010) It may result from primary agenesis or secondary atrophy of one of the umbilical arteries. SUA is associated with congenital anomalies in up to 30% of cases, most commonly involving the cardiovascular, renal, and gastrointestinal systems (Hua M & Odibo AO, 2010; Geipel A & Berg C, 2000)

Although SUA may be detected as an isolated finding on antenatal ultrasonography, the risk of associated anomalies cannot be completely excluded. We present a case of antenatally diagnosed isolated SUA with a postnatal finding of imperforate anus, highlighting the limitations of prenatal imaging.

Case Presentation

A 26-year-old gravida 2 para 1 living 1 woman with a history of previous lower segment cesarean section presented at 38 weeks and 2 days of gestation for elective cesarean delivery.

Her antenatal period was uneventful. A detailed anomaly scan performed at 20 weeks of gestation revealed a single umbilical artery with no other structural abnormalities. The patient was counseled and kept under regular antenatal follow-up.She underwent an elective cesarean section and delivered a live male neonate weighing 2.8 kg. The neonate cried immediately after birth and had good Apgar scores.On postnatal examination, the neonate was found to have imperforate anus. No other obvious external anomalies were noted at birth. Due to financial constraints, the baby was referred to a government hospital, where a colostomy was performed on day 3 of life.The mother had an uneventful postoperative and postpartum course and was discharged on postoperative day 5 in stable condition.

DISCUSSION

Single umbilical artery is a well-recognized marker for congenital anomalies. Studies have shown that SUA is associated with structural abnormalities in multiple organ systems, even when detected as an isolated finding antenatally (Hua & Odibo, 2010; Geipel & Berg, 2000).

In the present case, antenatal imaging identified SUA without any associated anomalies. However, the neonate was diagnosed postnatally with imperforate anus, an anorectalmalformation. This finding highlights the limitations of routine anomaly scans and the possibility of missed gastrointestinal anomalies.

Anorectal malformations are often associated with other congenital anomalies and may be part of syndromic conditions (Martinez-Payo C, 2005; Stoll C, 2007). Previous studies have documented associations between SUA and gastrointestinal abnormalities, although imperforate anus is relatively uncommon [6,7].

This case emphasizes the importance of:
Detailed fetal anatomical survey
Regular antenatal follow-up
Thorough neonatal examination even when antenatal findings appear reassuring

Early detection of such anomalies allows timely surgical intervention and improved neonatal outcomes.

This case also emphasizes the need for a structured postnatal screening protocol in neonates with antenatally diagnosed single umbilical artery, even when no additional anomalies are detected prenatally. Early identification and timely surgical intervention can significantly improve neonatal outcomes.

CONCLUSIONS

Isolated single umbilical artery on antenatal ultrasonography does not completely exclude the presence of associated congenital anomalies. Careful neonatal examination is essential to identify occult abnormalities such as imperforate anus. A multidisciplinary approach is crucial for optimal management and outcomes.

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