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En caul vaginal birth of a second trimester trisomy-21 fetus, as a result of medical pregnancy termination

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Abstract

En caul delivery is defined as the neonate is delivered inside the entire intact amnion. This condition is extremely rare. The majority of cases, is associated with premature neonates. We report a case of a 35-year-old woman who underwent medical abortion due to fetal Down's Syndrome diagnosis. The patient received medication with misoprostol. After a few hours, the woman gave vaginal birth to a 23-week fetus with intact entire amnion. The combination of prematurity, nulliparity, vaginal en caul birth, and medical pregnancy termination has not previously been described.

Key words: En caul birth, vaginal delivery, pregnancy termination, trisomy-21

Introduction

En caul deliveries, also called 'veiled', are defined as a delivered fetus is completely contained inside the amniotic sac. It is extremely rare incident which happens only 1 in 80,000 births. Most en caul births are associated with prematurity and low gravida. In this paper we report a case of a 23-weeks pregnant woman who underwent medical termination of her pregnancy, as Trisomy 21 was detected during prenatal screening tests. The patient gave birth of a fetus which was completely encased in the amniotic sac.

Case Report

Herein, we report a case of a 35-year-old primiparous woman at the 23rd week of pregnancy, with a previous vaginal birth. At her first-trimester examination, nuchal translucency thickness was 2.1mm. The woman was thoroughly informed and counseled to proceed to chorionic villus sampling, but instead she refused. Ultrasound findings during second-trimester of examination discovered cardiac defects, hyperechogenic bowel and echogenic intracardiac focus. The patient underwent scheduled amniocentesis. Cultured fetal cells revealed Trisomy



Figure 1. 'En caul' vaginal birth of a second trimester Trisomy-21 fetus.

21. The couple decided to proceed to pregnancy termination.

At the 23rd week of gestation the woman was admitted to our gynecological department. After obtaining informed consent, the patient was administered with misoprostol, according to the FIGO (The International Federation of Gynecology and Obstetrics) dosage chart. Ten hours after the induction onset, gradual descent and passive dilation, the patient gave birth. A female neonate was born with cephalic presentation and an intact placenta contained within the amniotic sac as a unit 'en caul'. The postpartum period was uneventful and the patient was discharged two days after the delivery.

Discussion

'Mermaid birth' or 'veiled birth' is an unusual phenomenon and occurs when the fetus is born enclosed in a 'caul', known as amniotic sac. Vaginal en caul delivery happens spontaneously, is considered rarest subtype compared to caesarean births and is

associated with prematurity and low gravida¹. En caul birth is a subtype of caul birth. A caul delivery happens when a piece of membrane covers the newborn's head or face. The veil can be gently removed by slipping it away.

It seems that amniotic sac and intact membranes provide protection, especially in extremely preterm infants and their umbilical cords, against mechanical forces and potential obstetric trauma during labor contractions^{1,2,3}. The protective role against pressure trauma is essential during preterm breech pregnancies¹. En caul delivery is also an effective technique towards corticosteroids course, umbilical cord prolapse and uterine injuries during caesarean deliveries^{1,2}.

The amniotic sac protects the fetus from forces during labor and delivery. Other benefits include protection from a cord prolapse—when the umbilical cord slips into the cervix in front of (or below) the fetus. Moreover, fetuses born fully enclosed inside unruptured amniotic sac, present improved neonatal morbidity⁴. En caul preterm births are associated

with significant higher arterial ph values^{1,3}. However, veiled births are associated with the same perinatal mortality rate concerning to fetuses with ruptured membranes⁴. According to the literature, possible complications associated with 'en caul' delivery are similar to non-en caul preterm births. Hemorrhage, fetal respiratory distress and neonatal anemia have also been reported².

Conclusion

'En caul' vaginal births are exceptionally fascinating deliveries. They are so incredibly rare, that most health professionals never witness an 'en caul' birth in their entire careers. The combination of preterm vaginal en caul birth and medically induced abortion has not previously been described. That characterizes our case as unique.

Consent

Informed consent was obtained.

Conflicts

The authors declare no conflicts of interest.

Authors' contribution

Damaskini Polychroni wrote the first draft. Petros Macheras, Asterios Nidimos, Sofia Apanozidou and

Panagiotis Provetzas critically reviewed and amended the draft. All authors approved of the final draft.

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