



A Case Report of Intrauterine Fetal Death with Three Loops of Umbilical Cord around Neck, Keratin Hair Treatment during Pregnancy Could be the Cause

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ABSTRACT

Intrauterine fetal death is a traumatic event for mothers and families, especially if it occurs in the last trimester and before the day of elective cesarean section as in our case. I hope we may highlight some important common environmental avoidable risk factor.

Keywords: Fetal death; Umbilical Cord

INTRODUCTION

Intrauterine uterine fetal death is the medical term for fetus that dies in utero after the 20th week of gestation, it account for about less than 1% of pregnancies [1,2].

In many cases (about 1 in 4), it's difficult to know the exact cause, but there may be maternal, fetal, placental causes [3-7].

CASE DESCRIPTION

33 years old pregnant lady G3 P2 presented to Al-Elwiya maternity teaching hospital in Bagdad, Iraq, complaining from sudden absence of fetal movement and feeling of lightening one hour before admission. She was 38 weeks of gestation with good antenatal care. Her date of elective cesarean section was tomorrow when she came. She visited radiologist and did Ultrasound and the report revealed (single non-viable fetus of 38 weeks of gestation, cephalic presentation, no gross congenital anomalies, good amount of liquor, anterior placenta), she did ultrasound before 2 weeks and was normal study.

History of present pregnancy was uneventful with good antenatal care with good fetal growth every visit to her doctor,

except that she visit a hair beauty center in her 30 week of gestation and put keratin on her hair and spent two hours in the center smelling the irritant odor of that product.

After that she noticed decrease in fetal movement but she didn't inform her doctor because she was an employer and she thought her tiredness affect her perception.

Her husband is 38 years old employer, his blood group is O +ve, and consanguinity is negative.

Past medical history was negative for any chronic illness

Past surgical history: She had previous two cesarean sections, on 2007 and 2011.

Drug history: She had allergy to penicillin. She didn't use any drugs. She wasn't smoker and she didn't drink alcohol. She lives with her husband and 2 daughters in urban area with a good socioeconomic state. She didn't have any history of gynecological problem or sexual transmitted infection or domestic violence.

On examination:

- Patient was conscious, alert, height 162centimeters, weight 96 kilogram

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- Neither pallor nor cyanosis, normal vital signs, chest was clear, normal heart sounds
- Bilateral mild pitting leg edema

Abdominal (obstetrical) examination

Inspection: Distended abdomen, everted umbilicus, scar of previous cesarean sections in the suprapubic region, striae gravidarum, striae albicans, linea nigra.

Palpation: Fundal height was about 38 centimeters, soft abdomen, cephalic presentation, the head was fifth palpable abdominally so it was still not engaged fetal heart was negative.

Pelvic exam: The cervix was closed, thick and posterior.

Investigations: Blood group was a positive, complete blood count, random blood sugar, general urine examination, everything was normal. Hepatitis B virus surface antigen, HIV viruses 1 and 2 antibody, hepatitis C virus antibody were negative cross matched blood prepared then emergency cesarean section done after one hour of admission on October 2015 at Al-Elwiyah maternity teaching hospital.

Intra operatively: The baby delivered, dead male fetus of 3.600 kilograms (fresh death with no gross congenital anomaly) with three tight loops of cord around the neck and two true cord knots. The operation passed smoothly under general anesthesia and also the post-operative period with no complications during puerperium.

DISCUSSION

Keratin hair treatment is a treatment that makes the hair smoother and shiner [8,9]. In our country it's done by barbers in hair cut salons and hair beauty centers. The treatment may take 2 hours. It's mixed with formaldehyde, that can cause a runny nose, burning eyes, nose and throat irritation [10].

The strong smell cause active and strong fetal movement at the time she spent in the beauty hair center, which may be the cause of the umbilical cord loops around the neck, but a super active fetus in the second trimester, may be the cause of true knots. This patient latterly had 2 more viable babies: a male and a female delivered by elective cesarean section at 2017 and 2019 at 37 weeks of gestation and she didn't put keratin hair treatment during her next pregnancies.

RECOMMENDATIONS

- Advice should be given to all pregnant ladies regarding the might harm of keratin treatment in pregnancy.
- Instructions should be given to barbers and hair stylist to avoid the use of keratin treatment to any pregnant women and asking any lady about the possibility of pregnancy to avoid any harm to the fetus.

- More studies are needed regarding the harm of keratin treatment during pregnancy.
- Non engaged head with decrease fetal movement may raise the suspicion of the presence of umbilical cord loops around neck especially after 36 week of gestation in multiparous lady.
- Decrease fetal movement is a warning sign of fetal death, and cord knots and loops around the neck may be present and must be asked for during routine ultrasound examination.

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