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UMBILICAL CORD WRAPPING AND ENLARGEMENT IN MONOCHORIONIC MONOAMNIOTIC TWINS WITH LETAL OUTCOME

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Case report

Keywords: umbilical cord, wrapping, monoamniotic monochorionic twins

SUMMARY. We present the case of tapered umbilical cords in monoamniotic monochorionic twins with late abortion as an outcome. A pregnant woman at the age of 38 had healthy course of her second pregnancy. In the 9th week of gestation, a monoamniotic monochorionic pregnancy was diagnosed by ultrasound. Early amniocentesis was done due to the older age of a mother. During the procedure an enlargement of the umbilical cord was discovered, and the wrapping of the two umbilical cords. Mosaic trisomy of the 21st chromosome was proved. In the 19 w + 3 d gest., negative heart beats were detected for both of fetuses. The induction of abortion was initiated by prostaglandin vaginal gel (dinoprost). There was no signs of maceration, the weights were 230 and 190 grams, with increased and wrapped umbilical cords. The pathohistological finding confirmed monochorionic-monoamniotic twin pregnancy with a long and tightly knit umbilical cord with complete blood flow obstruction and no signs of fetal malformalities. Also, there were no clinical signs of fetal transfusion syndrome. It is probably that the umbilical cord of the second twin was hypoplastic and with more complications.

Case report

We found that umbilical cord enlargement (UCE) with wrapping in monoamniotic monochorionic twins (MAMCT) with late spontaneous abortion. The patient was 38-year old secundigravida with verified MAMCT pregnancy at 9th week, and regular pregnancy course. The early amniocentesis was performed at 14 weeks because of the higher age of the mother. During the procedure the ultrasound examination detected the UCE and wrapping. Early amniocentesis finding was mosaicism from trisomy of the 21st chromosome. At 19 weeks + 3 days intrauterine fetal deaths were detected with ultrasound, and after a normal laboratory haemogram and coagulation findings, the induction of abortion with dinoprost vaginal gel has started, and aborted „en bloc“ stillborn twins with no signs of maceration, the

birthweights were 230 and 190 grams with multiple wrapped umbilical cord enlarged, placenta weighted 220 grams (*Fig. 1.*). Pathohistological finding was MCMA placenta with a long and strongly wrapped umbilical cord with complete obstruction of umbilical circulation, with no signs of malformation of fetuses. Also, there were no clinical signs of the fetofetal transfusion syndrome (FFTS). Probably the umbilical cord of the left, the second fetus was hypoplastic and more complicated.

Comments

Complications with increased perinatal morbidity and mortality in multiple pregnancies are 4 times more than in singletons, especially because of assisted reproduction procedures, abnormalities of the placenta and



Figure 1. Umbilical cord enlargement with wrapping in monoamniotic monochorionic stillborn twins

umbilical cord occupy an important place. The totality of the monoamniotic twins is extremely rare, in about 1% of monozygotic twins. Perinatal mortality is higher in monochorionic twins (11% vs. 5% in bichorionic twins) primary due to intrauterine growth restriction (IUGR), FTTS and umbilical cord enlargement or, rarely, wrapping or torsion (1–3).

Early growth restriction in MAMCT, most commonly caused by early FTTS is defined by a fetal weight difference > 25% between twins (1,4). UCE with wrapping has been associated with a high incidence of fetal mortality rate because due to obstruction of umbilical circulation (3). Wrapping with UCE is possible to detect by ultrasound in MCMAT during the first trimester, however, depending on the degree of coiling, tension and wrapping of the umbilical cord, intrauterine death is not possible to predict (5), although it is known for a high percentage of what cannot be influenced.

Despite of chromosomal abnormalities and umbilical cord wrapping in MCMAT, the final outcome of the pregnancy could not be predicted.

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ZAPETLJAJ I UVEĆANJE PUPČANE VRPCE U MONOAMNIOTSKIH MONOKORIJATNIH BLIZANACA SA SMRTNIM ISHODOM

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Prikaz slučaja

Ključne riječi: pupkovina, zapetljanje, monokorijalna monoamnijska blizanačka trudnoća

SAŽETAK. Prikazujemo slučaj zapetljane uvećane pupčane vrpce u monoamniotičnih monokorijalnih blizanaca s kasnim pobačajem. Trudnica u dobi od 38 godina imala je, do tada, uredan tijek svoje druge trudnoće. U 9. tjednu ultrazvučno je dokazano da se radi o monoamnijskoj monokorijatnoj trudnoći. Rana amniocenteza učinjena je zbog veće dobi majke. Tijekom izvođenja amniocenteze ultrazvučnim pregledom otkriveno je uvećanje pupčane vrpce te zapetljanje dvaju pupčanih vrpca. Dokazana je mozaična trisomija 21. kromosoma. U 19 tjedana + 3 dana otkriveni su negativni kucajevi oba ploda te je naon laboratorijske započeta indukcija pobačaja prostaglandinskim vaginalnim gelom (dinoprost). Pobačeni plodovi nisu imali znakove maceriranosti. Mase plodova iznosile su 230 i 190 grama, uz povećane i zapetljane pupčane vrpce. Masa posteljice iznosila je 220 grama (*slika 1.*). Patohistološki nalaz govorio je u prilog monokorijatnoj monoamnijskoj posteljici s dugom i čvrsto zapetljanoj pupkovini s potpunom opstrukcijom krvnog protoka, bez znakova nepravilnosti plodova. Također, nije bilo kliničkih znakova sindroma fetofetalne transfuzije. Vjerojatno je pupčana vrpca lijevog odnosno drugog ploda bila hipoplastična i s više komplikacija.