The Research Institute of Obstetrics, Gynecology and Reproductology named after D.O.Ott, St. Petersburg, Russia

THE CHORION TYPE EFFECTS ON THE COURSE OF TWIN PREGNANCIES

Bespalova Olesya - MD, PhD, DMSc, Kosyakova Olga - Postgraduate student

Introduction

Perinatal care and delivery of multiple pregnancies are topical problems in modern obstetrics. The reason for it is high level of complications for women and fetuses during gestation, delivery and post-natal periods. In pregnancy with twins perinatal morbidity and mortality up to 6 times higher than in singleton pregnancies, and in monochorionic these rates are 3-4 times higher than the dichorionic.

In connection with this multiple pregnancies require a differentiated approach to them, depending on the history of the occurrence and the type of placentation. Since it is the chorality in pregnancy of twins that has a significant effect on the incidence of complications, the tactics of managing pregnancy and labor, determines the prognosis of perinatal outcomes.

Materials and Methods

We conducted retrospective analysis of the pregnancy duration and labors in 765 cases of twins births between 2007 to 2017.

Results

The percentage of twins that were delivered was 2.2%. The ratio of monochorionic and dichorionic types was 1:10. In this case, this ratio of spontaneous twins was - 1: 8, and 1:12 for the induced ones.

The duration of monochorionic twins pregnancies, regardless of occurrence and type, was accompanied by complications at different periods of gestation in 100% cases: premature delivery was diagnosed in 74% of cases, preeclampsia of various severity in 71%, anemia in 70%, gestational diabetes mellitus in 62%, premature rupture of membrane in 41%, chronic placental insufficiency in 77% of cases, and feto-fetal syndrome in 18%.

COMPLICATIONS	MONO CHORIONIC (N-72)	DI CHORIONIC (N-693)	x ² , OR(95% CI) P-Value
Placental insufficiency	77% - 55	47.4% - 328	X ² =22,03, P<0.0001 OR 3,6 (CI:2,1-6,1)
Premature delivery	74% - 53	58.7% - 406	X ² =6,13,P<0.01 OR 2,0 (CI:1,15-3,4)
Preeclampsia	71.2% - 51	45% - 312	X ² =17,43,P<0.001 OR 2,9 (CI:1,8-4,9)
Anemia	70% - 50	44.8%- 310	X ² =15,98,P<0.001 OR 2,8 (CI:1,7-4,6)
Gestational diabetes mellitus	62% - 45	36% - 249	X ² =19,46, P<0.001 OR 3,0 (CI:1,8-4,8)
Premature rupture of membrane	39% - 28	30% - 207	X ² =2,49,P>0.05 OR 1,5 (CI:0,9-2,4)
Cervical incompetence	31% - 22	24% - 166	X ² =1,53, P>0.05 OR 1,4 (CI:0,8-2,4)
Hydramnion	23% - 16	17.5%- 121	X ² =0,02, P>0.05 OR 0,98(CI:0,5-1,7)
Feto –fetal syndrome	18.1% - 13	0%	X ² =127,29, P<0.000001

During the gestation of dichorionic twins complications were diagnosed not so often and reached 60%: premature birth in 58.7%, premature rupture of membrane in 30%, placental insufficiency in 47.4%, preeclampsia of various severity in 45%, anemia in 44, 8%, cervical incompetence in 24%, hydramnion in 17.5%. In the case of induced twins, complications were observed seven times more often.

Vaginal delivery occurred in 189 (25%) pregnant with twins. A total number of 576 (75%) pregnancies with twins were completed by a cesarean section.

72% of pregnant women with monochorionic twins were delivered operatively. The main indications for cesarean section were: increase in the severity of placental insufficiency - 42%, acute hypoxia of one of the fetus - 27%, and an increase in severity of preeclampsia-15%.

Meanwhile, 70% of cases were premature deliveries.

In case of dichorics, the indications were following: improper position of fetus in 20%, severity of placental insufficiency in 18% , acute hypoxia of one of the fetus in 15%, increase in severity of preeclampsia in 12%, anomaly of labor activity in 6% and bleeding in 2,5%.

Conclusion

Differentiated approach, depending on the type of placentation, timely correction of specific complications of multiple pregnancy contributes to the improvement of perinatal outcomes in this group of pregnant women of high risk.