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A selective fetal reduction in triplet pregnancy at saims, Indore

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Abstract

Background: Triplet & higher-order multiple pregnancies are well known to be associated with increased unfavorable outcomes. Study reviewed the perinatal outcomes in women among a triplet pregnancy who underwent fetal reduction versus expectant management at a university hospital in Hong Kong.

Result: The mean age of the mothers was 33.68 ± 3.09 years. Around 33% of triplet pregnancies had ovulation induction and 77% of triplet pregnancies by IVF. The mean gestational age of the mother was 239 ± 11.64 with range of 197 to 262 days.

The miscarriage (pregnancy loss before 24 completed weeks) rate in our study was 3%. In our study it is found that delivery rate at ≤ 32 Weeks of gestation was 7.5%, delivery rate at ≤ 35 weeks was 56.7% & delivery rate at > 35 weeks was 43.3%.

Keywords: Fetal Reduction, Pregnancy

Introduction

Over the past 10 years, the no. of women carrying three fetuses has increased dramatically as a result of infertility treatments including the use of ovulation-inducing agents and assisted reproductive technology. First trimester multi fetal pregnancy reduction (MFPR) can be performed in order to decrease the risk of complications associated with multiple gestations. These complications include extreme prematurity before 32 weeks, low birth weight infants, fetal death in utero, high levels of perinatal mortality, and high levels of perinatal morbidity, which includes cerebral palsy and necrotizing enterocolitis. The termination of one of the normal embryos in a triplet pregnancy is an alternative to either the abortion of all the fetuses or to the acceptance of the risk of extremely premature delivery. Although the procedure poses no ethical problems when dealing with high order multiple fetal gestations (quadruplets, quintuplets or more), the same is not true concerning triplets for whom the indications have not been clearly established^[1, 2].

Material & Method

A total of 72 women pregnant with triplets were referred to our institution over a 12 year period. Triplet gestations reduced to singletons were excluded from the study because it may have created a bias in calculating the rate of prematurity and the fetal growth. The mean age of patients was 33.68 ± 3.09 years for the reduced group (range: 18–42 years) There was no significant difference concerning maternal age.

The expectantly managed group was managed as previously reported (Boulot *et al.*, 1993a)^[3]. all triplets showed ultrasonographic features of trichorionic placentation. Leave from work was systematically imposed as well as a substantial reduction in maternal physical activity, once the diagnosis of triplet gestation was established. Management at home began at 20 weeks by a midwife. In cases of cervical change or increased uterine activity, women were immediately referred to our centre.

Results

Table 1: Maternal Characteristics and delivery data

	Fetal Reduction
Maternal age in years (mean ± SD)	33.68±3.09
Mode of conception	
Ovulation Induction	24 (33%)
IVF	48 (77%)
Miscarriage (<24 Weeks)	2 (3%)
Gestational age at delivery in days	239±11.64
Frequency Distribution of Gestational age at delivery	
24<28 Weeks	00
28<32 Weeks	04 (6%)
32<34 Weeks	11 (16%)
34<36 Weeks	40 (56%)
36<37 Weeks	11 (16%)
≥37 Weeks	04 (6%)

The mean age of the mothers was 33.68±3.09 years. Around 33% of triplet pregnancies had ovulation induction and 77% of triplet pregnancies by IVF. The mean gestational age of the mother was 239±11.64 with range of 197 to 262 days. The miscarriage (pregnancy loss before 24 completed weeks) rate in our study was 3%

Table 2: Our result vis embryo reduction and Boulot *et al's* Study

	Our Study Fetal Reduction (n=72)	Boulot <i>et al's</i> (n=65)	P-value
Miscarriage rate (<24 Weeks)	02 (3%)	5.4%	>0.05
Gestational age at delivery			
≤32 Weeks	7.5%	14.3%	>0.05
≤35 Weeks	56.7%	25.4%	<0.05
>35 Weeks	43.3%	74.6%	<0.05
Baby's birth weight			
<1500 gm	5.8%	6.9%	<0.05
1500≤2500 gm	88.3%	50.8%	>0.05
> 2500 gm	5.9%	42.3%	>0.05

In our study it is found that delivery rate at ≤32 Weeks of gestation was 7.5%, delivery rate at ≤35 weeks was 56.7% & delivery rate at >35 weeks was 43.3%.

Discussion

Multiple pregnancy is an increasingly important problem in obstetric practice as a result of the success of fertility procedures. Their incidence is expected to continue to rise as fertility services both in Hong Kong and in other nearby countries such as Taiwan, Thailand, and Mainland China become more accessible and affordable. As shown in our cohort, over 80% of triplet pregnancies were conceived by ART. This is the first study of the outcomes of triplet pregnancies following FR in Hong Kong. Of note, FR may not be acceptable to all parents, and parental choice has a strong influence on decisions about intervention. To make the best informed choice, parents should be counselled adequately on the benefits and risks of expectant management versus FR. The provision of local data on perinatal outcomes following FR is an essential part of that counselling [4].

The primary aim of FR is to reduce neonatal morbidity consequent to prematurity. Our results show that FR in a triplet

pregnancy has the benefit of increasing the gestation at delivery and reducing the risk of extreme preterm delivery earlier than 32 and 28 weeks. The mean gestation at delivery was 32.6 weeks in the expectant management group versus 35.2 and 39.6 weeks in the FR to two fetuses and one fetus, respectively. This indicates that the performance of FR in Hong Kong is comparable with that reported in the literature and our results reaffirm previously reported data in which FR in triplet pregnancies to twins can prolong the pregnancy by approximately 3 weeks [5]. In women with expectant management, 16.7% and 29.2% had extreme preterm delivery before 28 weeks and 32 weeks, respectively. In women with FR to two fetuses, there was no extreme preterm delivery of <28 weeks, and 23.8% delivered before 32 weeks. The risk of preterm delivery earlier than 32-33 weeks following FR has been reported to be between 24% and 37%, which are comparable to our results [6]. All women with FR to one fetus had term deliveries. Despite the prolongation of pregnancy, however, the overall survival following FR was not significantly different to that following expectant management. In fact, studies of FR in triplet pregnancies have not shown an increase in perinatal survival [7].

Conclusion

The medical risks of multifetal pregnancy, the potential medical benefits of multifetal pregnancy reduction & the complex ethical issues inherent in decisions regarding multifetal pregnancy reduction. They should be prepared to respond in a professional & ethical manner to patients who request or decline to receive information, or intervention, or both. Multifetal pregnancies should be prevented whenever possible. Approximately all cases, it is preferable to avoid the risk of higher-order multifetal pregnancy by limiting the number of embryos to be transferred or by cancelling a gonadotropin cycle when the ovarian response suggests a high risk of a multifetal pregnancy. When multifetal pregnancies do occur, incorporating the ethical framework presented in this Committee Opinion will help OBG counsel and guide patients as they make decisions regarding continuing or reducing their multifetal pregnancies.

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