

Successful outcome of a Triplet Gestation in a patient with history of ovulation-inducing drugs, Somalia

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Abstract: Many triplets are conceived as a consequence of assisted reproductive technology (ART). Concerns have been raised that triplet pregnancies conceived by ART are more complicated than those conceived spontaneously. The rate of multiple pregnancies has increased worldwide over the past three decades, primarily as a consequence of the increased application of ART. Triplets conceived by ART are more likely to have TCTA placentation and TCTA triplet sets had lower mortality rates than other triplet combinations. Outcomes for triplets conceived by ART were similar to those of triplets conceived spontaneously. Multifetal gestations are at an increased risk for spontaneous abortion, congenital malformations, and monozygosity-related conditions such as twin to twin transfusion syndrome, growth aberrations, reduced birth weight, preterm birth and prematurity. The incidence of maternal and fetal morbidity and mortality increases concomitantly with the number of fetuses in utero.

Keywords: Triplets; multiple births; Triplet gestation; pregnancy outcome; preterm labor.

1. INTRODUCTION

Multifetal pregnancy presents many serious obstetric problems because of difficulties in early diagnosis, increased incidence of antenatal and delivery complications, and high perinatal morbidity and mortality. Higher-order multiple births (3 or more) are now increasingly common as a result of ovulation induction and artificial reproductive technologies (ART). Almost 50–60% of all triplets, 75% of all quadruplets and virtually all quintuplets now follow these treatments. Currently, the technology is widely available in many developing countries. Therefore, the consequences of higher-order multifetal pregnancy and its management dilemma in low-resource settings are important issues. Triplet pregnancies are at higher risk of maternal and perinatal morbidity and mortality (Kore, 2010). The rate of multiple pregnancies has increased worldwide over the past three decades, primarily as a consequence of the increased application of ART (Reynolds, 2003). ART includes ovulation induction, in vitro fertilization and gamete intra-fallopian transfer. The high rate of multiple births following ART is largely explained by the number of embryos transferred during treatment (Umstad, 2013); however, the trend of advanced maternal age at spontaneous conception has also contributed to the increase in the multiple birth rates (Umstad & Lancaster, 2005).

2. CASE

A forty-four-year-old gravida 2 para 1 was referred from SHAAFI HOSPITAL, admitted MOGADISHU SOMALIA TURKEY RESEARCH AND TRAINING HOSPITAL at 27-07-2018 due to High Risk Obstetrics with a diagnosis of trichorionic triamniotic triplet gestation. She had been treated with clomiphene citrate for 4 months to conceive following a history of unexplained secondary infertility for 4 years because of irregular menstruation and hormonal disturbances. An ultrasonography done on admission revealed 30 weeks gestation was reported as a trichorionic triamniotic triplet gestation. This was based on bi-parietal diameter (BPD), head circumference (HC), abdominal circumference (AC), and femoral length (FL). Three separate and distinct fetal heartbeats were also reported. First one was cephalic, other 2 were

breach presentation, amniotic fluid was adequate, gross pathology not seen but there is fetal distress in Non-stress test (NST). During this pregnancy, she had full antenatal care and no other medical disorders. She reported family history of twins (herself is twin) and quadruple pregnancy for her aunt. Emergency cesarean was undertaken after 2 hours on admission. 3 healthy infants was delivered (2 male, 1 female) weighing 1.568 grams, 1.667 grams and 1.690 grams at 30 weeks of gestation. Apgar's were 7, 6 and 7. Only one of the triplets had a club foot. Infants were admitted in neonatal intensive care unit due to the prematurity but mother was discharged home on postpartum day four.

3. DISCUSSION

Multifetal gestations are at an increased risk for spontaneous abortion, congenital malformations, and monozygosity-related conditions such as twin to twin transfusion syndrome, growth aberrations, reduced birth weight, preterm birth and prematurity. The incidence of maternal and fetal morbidity and mortality increases concomitantly with the number of fetuses in utero (Wilson, 2014)

Triplets had a significantly lower mean average birth weight than twins (1,596 vs. 2,317 gram, $P < 0.018$) and lower gestational age at delivery (32.9 vs. 35.9 weeks; $P < 0.03$). Preterm labor occurred significantly more often in triplet than in twin gestations (80.5% vs. 41.5%) as did pre-term delivery (87.8% vs. 46.2%)

There was also a significant difference in the perinatal mortality rate in triplets as compared to twin gestations (260 vs. 85 per 1,000). Multiple pregnancies are associated with a 7-fold higher rate of neonatal mortality in twins and more than 20-fold higher rate in triplets and higher-order multiples as compared to singletons.

Respiratory problems affect most of the infants and include respiratory distress syndrome and apnea of prematurity in the short term and bronchopulmonary dysplasia (BPD) or chronic lung disease in the long term.

Neurologic problems characteristic of VLBW infants include intraventricular hemorrhage (IVH) and periventricular leukomalacia. Periventricular leukomalacia is seen less often (4%–8% in most series), with peak incidence at approximately 28 to 29 weeks' gestation, in contrast with the incidence of IVH, which seems to correlate inversely with gestational age. Both of these conditions predispose to long-term neurodevelopmental impairment that may include cerebral palsy, mental retardation, and visual, hearing, and behavioral problems.

Most of the neonates of the present series required admission to NICU, and their stay varied from 2 days to 32 days, which was almost inversely proportional to their gestational age at delivery and birth-weights. Although, counseled antenatally, the women were not mentally well prepared to look after 3 small newborns simultaneously, and were often unable to cope with the stress. Breastfeeding is also an extremely challenging task. Most of them were also fatigued because of walking back and forth between the maternity ward and NICU. In the present study, there were 4(22.2%) perinatal deaths, which it is comparable to other Indian reports (Pathania, 2011) Consistently high perinatal deaths related to prematurity remains a major concern in triplet gestations worldwide,9-11 and it is more so in developing countries because paucity of specialized neonatal care (Pathania, 2011).

In summary, triplet pregnancies are complicated by a significantly higher incidence of preterm labor and delivery, growth retardation, discordance, and more NICU admissions than are twins. The triplets have an increased risk of several neonatal complications including neonatal death, respiratory distress syndrome, intraventricular hemorrhage, hyperbilirubinaemia, and the need of blood transfusions (Al- Suleiman, Al- Jama & Rahman, 2016).

4. CONCLUSION

It is well known that singletons fare better than twins, and twins fare better than triplets. It is also unequivocally accepted that prevention of a triplet pregnancy is better than any "treatment" when such multiples are generated by infertility treatment. Triplets conceived by ART are more likely to have TCTA placentation and TCTA triplet sets had lower mortality rates than other triplet combinations. Outcomes for triplets conceived by ART were similar to those of triplets conceived spontaneously. Early diagnosis with determination of chorionicity, antenatal counseling, psychological and financial support, and availability of advanced neonatal care are the cornerstones of favorable outcome in triplet gestation. Psycho-social preparation of the parents and their families is also vital to cope with the simultaneous needs of 3 low birth-weight neonates.

REFERENCES

- [1] Al- Suleiman, Al- Jama & Rahman. (2016). Obstetric complications and perinatal outcome in triplet pregnancies. J Obstet Gynaecol, 200-204.
- [2] Kore, P. H. (2010). Triplet pregnancy. J Obstet Gynaecol India., 42-44.
- [3] Reynolds, M. A. (2003). Trends in multiple births conceived using assisted reproductive technology. ResearchGate.
- [4] Umstad & Lancaster. (2005). The epidemiology of multiple births in Australia. Australia and New Zealand Journal of Obstetrics and Gynaecology,, 26–38.
- [5] Umstad, M. S. (2013). Multiple deliveries: The reduced impact of in vitro fertilisation in Australia. Australia and New Zealand Journal of Obstetrics and Gynaecology, , 158–164.
- [6] Wilson. (2014). Reproductive outcomes after pregnancy complicated by maternal-fetal surgery. The American Journal of Obstetrics and Gynecology,, 1430–1436,.