

Multiple Birth Awareness

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Abstract

Twin pregnancy has been a fascinating subject and has generated a lot of interest in obstetrics, many religions, communities, and cultures. Multiple gestation still pose challenging problems for modern medicine. Almost every maternal and neonatal problem is increased in multiple gestations justifying their high-risk status and need for specialized management. Awareness of multiple birth is vital amongst patients, families, community, society, health care professionals and national health policy makers. They should have awareness about diagnosis, complications, management, socio-economic impact of multiple birth.

Keywords: Multiple births; Twins; Prevention; Congenital Anomalies.

Introduction

Moment a child is born, Mother is also born. Twice the blessings, Twice the fun, Two miracles instead of one.

Multiple pregnancy may sound attractive and exciting, but it's challenging. There can be significant risks associated with caring delivery and raising Multiple children. Each day gained in utero provide time for valuable fetal growth and development.

It is joyful to raise twins, triplets or more and to observe special bond. Multiple birth families can face challenges requiring unique solutions and various interventions. Australian Multiple Birth Association (AMBA) had announced the theme for this year

'Identical or fraternal' running from 21st to 28th March 2021. It is vital to highlight Multiple Birth awareness globally. This will enable to drive connection between Multiple Birth families and Society.¹

Awareness of what?

- 1 Precautions
- 2 Diagnosis
- 3 Complications
- 4 Management
- 5 Problems the parents of multiple birth face
- 6 Long term complications of multiple birth
- 7 Parents of multiple birth need support

Awareness of multiple birth should be created amongst:

- 1 Parents
- 2 Family members
- 3 Community
- 4 Society
- 5 Health professionals
- 6 National Health Policy makers

Twin pregnancy has been a fascinating subject and has generated a lot of interest in obstetrics, many religions, communities and cultures. Many myths are linked to the birth of twins.² Twins have aroused curiosity reverence and even cruelty since ancient times. Rome is said to have been founded by Romulus and Remus. Shakespeare, the father of twins, developed the theme of twins in "e Comedy of Errors". The most famous conjoint twins are Siamese twins: Chang Bunker and Eng Bunker.³

Pregnancy carrying more than one fetus is described as multifetal pregnancy or multiple pregnancy. On the basis of number of fetuses conceived simultaneously and growing, it is termed as twins, triplets, quintuplet and soon. Pregnancies within three or more fetuses are referred to as high order pregnancies or birth.⁴ Multiple gestation is a mixed blessing and if successful allows a couple to rapidly expand their family with a minimum number of pregnancies. Multiple birth is associated with significantly higher maternal morbidity and associated health care costs. Women with multiple gestations are nearly 6 times more likely to be hospitalized with complications, including preeclampsia, preterm labor, preterm premature rupture of membrane, placental abruption, pyelonephritis and postpartum hemorrhage. More frequent and serious complications increase as the number of fetus increase. Success of treatment results from better understanding, early diagnosis, fetal surveillance, counselling, skill and timely intervention. Placental physiology has a significant effect on fetal and neonatal outcome.

Discussion

Antenatal care plays a vital role in the final outcome of multiple pregnancies. Age at which patient conceives and parity for the present multiple gestation reflects the socioeconomic status and awareness among patients. Though multiple pregnancy is a high-risk pregnancy for mother and fetus, majority of the risk factors are preventable for a better maternal and perinatal outcome. As the antenatal complications seen in multiple gestations are more common in higher order pregnancies, antenatal management is directed at reducing their

incidence. Regular follow up, along with prevention of preterm labor and adequate bed rest, and tocolytics helps in improving the neonatal outcome at birth and prevents neonatal NICU admissions and mortality.

In the human multiple pregnancies arise more frequently from fertilization of two separate oocytes (Dizygotic twinning), than from a single fertilized oocyte that subsequently divides into two identical structures (Monozygotic twinning). The monozygotic twin frequency is more or less constant, but the dizygotic twinning rate is affected by:

- ◆ Race
- ◆ Genetic Factors
- ◆ Parity
- ◆ Maternal Age
- ◆ Endogenous Gonadotropin
- ◆ Fertility drugs
- ◆ Seasonality⁵

Embryo Reduction

It may sound ironic to deal with embryo reduction in a struggle to treat infertility. For the concerned couple, the decision to undergo reduction of the fetus or fetuses is difficult with traumatic experiences. Well informed sympathetic counselling to the couple may help in reducing the mental strain the couple goes through.⁶

Multiple conceptions are a frequent consequence of ovulation induction (OI), in-vitro fertilization (IVF), Gamete intrafallopian transfer (IFT) or related assisted reproductive technologies (ART). The number of multiple births would be higher if it were not for selective reduction, spontaneous reduction or early gestation sacs or embryonic loss of ova or more conception. Spontaneous reduction is a common occurrence in multiple pregnancies and decision to perform Multiple Fetal Pregnancy Reduction (MFPR) does need to be finalized.⁷

All multiple pregnancies should be offered a detailed midtrimester ultrasonographic scan. If a major abnormality is found, selective termination can be done. If the couple desires transvaginal USG or Colour Doppler guided embryo reduction is now possible. However, this is advised for higher order multiple births (>3). Embryo reduction is possible only in dichorionic pregnancies, the vascular connection of monochorionic pregnancy would allow potassium chloride to cross the other twin.⁸

The great paradox of multifetal pregnancy reduction is that couples who are desperately trying to conceive are obliged to consider termination of some embryo to allow other to survive. The fear that all fetuses would be lost after intervention also should

be discussed. Most women report guilt and mixed feelings when faced with the dilemma of multiple pregnancy reduction.

Negative feelings are pervasive during and after multifetal reduction. Some women express guilt that they sacrificed one (or more) embryo to save the others. Negative feelings are still expressed after delivery, mainly in the form of guilt and grief for the lost child. The surviving children are living reminders of the loss of the others. Despite these grave symptoms, the initial emotional conflicts seem to have no deleterious effects on mother child bonding.⁹

Complications of Multiple births

The complications of multiple gestation are:

- Increased risk of miscarriage.
- Increased risk of premature labor.
- Increased risk of pregnancy associated problems such as hemorrhage and high blood pressure.
- Increase requirement of cesarean section and its complications.
- Increased risk of an abnormal baby.
- Increased loss of a baby (stillbirth).
- Increased risk of baby with physical or learning disability as a result of premature birth¹⁰.

Management of fetal abnormality

In monochorionic pregnancies any fetal reduction technique used must occlude all the cord vessels to prevent exsanguination of the surviving twin along placental vascular anastomosis into the dead twin.

Prevention of Multiple Pregnancy

The principal means of reducing multiple births from assisted reproductive treatment cycles is primary prevention. Secondary prevention by means of embryo reduction involves difficult decisions for many infertile couples. Embryo reduction is not a feasible way to reduce the frequency of assisted reproductive treatment associated multiple births. Prevention would be enhanced if the singleton live birth rate were the principal outcome of assisted reproductive treatment reported by registries and clinical services. Successful IVF is a historic development in the treatment of infertility. The increase in multiple births is a barrier to further progress because despite their human appeal, multiple births generate numerous health and social concerns. Infertility specialist in all countries should address the prevention of multiple births in the most appropriate way, by means of improved clinical procedures.

Iatrogenic Twinning: The significant increase in the incidence of multiple births in most countries is almost entirely the result of the use of gonadotropins and other agents for induction of ovulation or assisted conception. Because of higher morbidity and mortality associated with twins and particularly triplets and the social consequences of looking after multiple siblings, every effort should be made to reduce the incidence. With IVF it is the number the embryos available rather than the number replaced that determines the chance of becoming pregnant.

Twin Pregnancy: Long Term Outcome

Twins and higher multiple birth tend to be disadvantaged from the start. The main early problems relate to prematurity. Children may suffer long term consequences of perinatal complications. Many forms of disability especially cerebral palsy are more common among multiples. There is a 3-7 fold of increase in cerebral palsy amongst twins and over 10 fold in triplets. Single survivor of a monochorionic twin is at the greatest risk of fetal death. Even when the babies are healthy, shared parental attention, triadic communication and their own intrapair relationship may all adversely affect their language development and those with delays in language development have a greater chance of developing reading difficulties later. Intense inter-dependence and competition can lead to behavior problems. Depression is more common in mothers of multiple birth than with singletons as are behavioral problems among siblings. If one twin dies the parents face special problems and the surviving twin may suffer from the bereavement into adulthood.

Multiple gestation pregnancy can be a rewarding fulfilment for infertile couples, but there are also psychological, medical, social and financial concerns for parents. The financial concerns arise mainly from the direct costs of prematurity: neonatal intensive care, drug therapy, inhalation therapy, imaging and other diagnostic procedures. Higher costs also are incurred after discharge, due to chronic health problems, visual problems and developmental disabilities.

All multiple pregnancies should have chorionicities determined at first scan, ideally in the first trimester, at which nuchal translucency screening may also be offered. Monochorionic pregnancies should be scanned at fortnightly intervals and complications such as twin to twin transfusion or IUGR referred to fetal medicine centre. Perinatal deaths can be prevented by averting preterm births by combined measures like good rest, prophylactic cervical encircage, short term tocolytics and administration of glucocorticoids. Timely diagnosis and treatment

of nutritional anemia and preeclampsia helps in preventing additional complications. Institutional delivery and provision of level 3 neonatal care helps in improving perinatal outcome. Early diagnosis and investigations to determine chorionicity helps in the management of this patients.¹¹

Conclusion

Multiple pregnancies still pose challenging problems for modern medicine. Complications associated with higher order pregnancies cannot be prevented but can be detected early and controlled adequately by proper and prompt management. Mothers with multiple gestations should receive increased obstetric care and be educated on timely intervention and developmental surveillance for optimal child growth and development.

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