TAMIL NADU FEDERATION OF OBSTETRICIANS & GYNAECOLOGISTS

e - Newsletter

Issue 7

On

MULTIPLE PREGNANCY

12th Novmber 2021

TAMIL NADU FEDERATION OF OBSTETRICIANS & GYNAECOLOGISTS

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TAMIL NADU FEDERATION OF OBSTETRICIANS & GYNAECOLOGISTS

TNFOG Plans to conduct TWO CME Program Every Month

1. Marathon CME 2. Magalir Nalam

MARATHON CME??
THIS POINTS TO TWO THINGS

1. The YUVA OGCIAN Competition

Yes, every month 2nd Friday CME will have a session with 2 YUVA speakers, Consultants less than 35 years.

The session will be judged by the same judges and at the end of the year,
First, Second and Third prize will be awarded to the best speakers at the Annual conference.

All societies gear up and suggest one YUVA speaker of your society.

2. There is a question at the end of every session in the CME. The first Delegate who answers the question will be awarded a prize. This will continue in all the CMEs.

BE READY TO WIN THE PRIZE

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President's Message

Warm greetings my dear comrades

I wish everyone good health in this Rainy weather. This month we have the Marathon CME and Newsletter on Multiple Pregnancy. The commonest multiple pregnancy is twins which is always "Double Trouble". In this era of ART, the multiple pregnancy esp. the twins either spontaneous or after foetal reduction are increased. In this newsletter there are articles like pathophysiology of multiple pregnancy, their growth velocity, the need for foetal reduction in ART.

I request all of you to go through the newsletter and replenish your knowledge about twins which will help in your day-to-day practice

Thank you,

Jai Hind

Dr. Anjalakshi Chandrasekar

President, TNFOG

Secretary's Message

TAMIL NADU FEDERATION OF OBSTETRICIANS & GYNAECOLOGISTS

Article: 1

Pathophysiology of Multiple Gestation

Dr. Niranjana Asokan
MS, DNB, MRCOG

When more than one fetus simultaneously develops in the uterus, it is called multiple pregnancy.

Simultaneous development of two fetuses/ twins is the commonest; although rarely, development of more than two may also occur. Multiple gestation is formed either because of fertilisation of multiple ova or division of single fertilised ovum.

Zygocity is determined by the type of conception. Chorionicity refers to the placentation or number of placenta.

Twin pregnancy forms either by fertilisation of two ova or by division of one fertilised ovum into two separate embryos. Hence classified as dizygotic or fraternal twins and monozygotic or identical twins respectively.

By chorionicity it is classified as monochorionic or dichorionic.

Dizygotic twins always have dichorionic placenta. In monozygotic twins the placenta can be either monochorionic or dichorionic. Further in monozygotic twins with dichorionic placenta there is possibility of placental fusion and vascular anastamosis of varying degree. In monochorionicity the placenta can have either two amniotic sacs termed as diamniotic or may have a single amniotic sac termed as monoamniotic.

Amnion is the innermost membrane that encloses the embryo.
It is a metabolically active membrane involved in maintaining amniotic fliuid homeostasis.

Chorion is the outer membrane surrounding the embryo. It is highly vascular and plays a role in formation of placenta.

The number of layers of chorion and amnion in monozygotic twins depends of the time of division of fertilised ovum.

Physiologically the chorion and amnion formation happen on day 4 and day 8 respectively after fertilisation. Hence if the cleavage occurs before day 4 both chorion and amnion split completely giving rise to dichorionic diamniotic placenta with an incidence of 25%.

When cleavage of cells happen between day 4 to day 8 after fertilisation then it results in formation of monochorionic diamniotic placenta. This has an incidence of 75%.

When cleavage process happens between day 8 and day 13 then monochorionic monoamniotic placentation develops. This is because by day 8 the chorion and amnion are fully differentiated resulting in single placental mass.

When division of embryo occurs after day 13, the separation of embryos is incomplete leading to conjoined twins of various types.

There are various factors which influence the formation of multiple gestation. These include race where Nigerians have highest incidence of twinning of 1 in 20 pregnancies.

Maternal family history of twins has an incidence of 1 in 58 pregnancies as compared to paternal history of twins which has incidence of 1 in 116 pregnancies.

Increasing maternal age of more than 35 years with highest incidence at 37 years for natural twinning happens since there is maximum FSH stimulation occurs leading to rate of multiple follicles development.

Increasing parity of four or more children has high incidence of 2.7 %as compared to first pregnancy with twins which has incidence of 1.3 %.

Women with high body mass index, those who are taller and heavier have a twinning rate of 25-30% greater than women who are short, and nutrition deprived.

The assisted reproductive technology and fertility treatment play an immense role in multiple gestation. The therapy with FSH with gonadotropins and clomiphene citrate enhances the chances of multiple gestation. This has an incidence of 16 to 40 %.

Comprehensively most common factor that links most of the above said factors is serum Follicle Stimulating Hormone, FSH. There is a theory as proposed by Benirchke and Kim in 1973 and Roth in 1977 stating that there is a high rate of twinning seen in women who conceive within one month after stopping oral contraceptive pills. This is explained by the possibility of release of pituitary gonadotropins in greater amounts during the first spontaneous cycle after OCP's than released in usual cycles.

Keeping in mind all these factors where multiple gestation is possible; a thorough history and early scans can help with diagnosis and further management.

Determining the zygosity antenatally is of great importance since it can aid in obstetrical risk assessment and guide antenatal and intrapartum management of multiple gestation.

Diagnosis of zygocity can be made by ultrasonogram. The USG done in first trimester has 90-100 % accuracy. The following are the points to be noted in first trimester USG.

Amnionicity can be successfully diagnosed before 8 weeks gestation. Presence of two yolk sacs confirms diamnionicity.

Chorionicity is determined by

1. The presence of number of placenta, two seperate placentae indicates dichorionicity.

2. The presence of lambda or twin peak sign indicates dichorionicity. This sign refers to the triangular projection of trophoblastic tissue into the membranes from the placental surface which is isoechoic with placental tissue giving rise to lambda sign. This gives 100% accuracy for prediction of dichorionicity.

3. For monochorionicity there is absence of the triangular projection and gives rise to T sign.

There is regression of chorionic frondosum starts in second trimester hence lamba sign slowly disappears by 20 weeks gestation in 7% cases. Thus the best time to assess chorionicity is first trimester.

In the second and third trimester chorionicity can be determined by

1. Fetal gender where fetuses with discordant genitalia or opposite sex are considered as dichorionic. But this is not accurate since 50 % of dizygotic twins are of same sex and same gender does not equate with monochorionicity.

2. Intertwin membrane thickness can be assessed where more than 2 cm thickness is a predictor for dichorionicity and this is also useful only upto 26 weeks.

This evaluation and diagnosis of chorionicity is of utmost importance since the complications associated with monochorionicity can endanger the life of one or both the fetuses. Hence once chorionicity is established further evaluation can be done to rule out vascular anastomoses between fetuses and prevent fetal demise. We can also be vigilant in looking for anomalies, cord entanglements, monitoring for discordance in growth and Fetal growth restriction.

Article: 2

Understanding the Foetal Growth Pattern in Twins vs Singletons

Dr. Sivapriya.R

MS OG.,
Assistant Professor, Government Dharmapuri Medical College

Introduction

With increase in infertility treatment like ovulation induction and assisted reproductive techniques, incidence of twin pregnancies is significantly increased over three decades. The twin pregnancies contribute to increased perinatal morbidity and mortality when compared with the singleton pregnancies. Twins contribute in a greater proportion to prematurity, low birth weight, growth restricted babies and neonatal intensive care unit (NICU) admissions than singletons. More occurrence of reduced growth rates and small for gestational babies are observed in twin gestation. Hence, understanding the growth pattern of twins is of utmost importance in preventing the adverse fetal outcomes in twins

Discussion

Twin pregnancies have a different growth pattern when compared to singletons. The difference in growth velocity appears before 30 weeks and it becomes more pronounced reaching term. The growth delaying in twins, particularly in third trimester may be due to normal physiologic growth

variation of twins (or) pathologic process inherent to twins. The pathological process unique to twin gestation resulting in growth abnormalities are increased incidence of abortions, congenital malformations (genetic as well as structural deformities), vascular anastomosis problems like twin reverse arterial perfusion, twin to twin transfusion syndrome).

The growth rate of the individual biometric indices may give us more understanding about the mechanisms underlying the delayed growth pattern. The growth of all the biometric indices are slower in twins compared with singletons, but the difference are much greater for abdominal circumference, which has a great impact on the fetal weight at term. The mean values for monochorionic twins were reduced than those for dichorionic twins for all biometric indices at any point of gestation, indicating that chorionicity plays very important role in growth discrepancies. Monochorionic twins are responsible for greater mortality and morbidity. The factors attributing in mono chorionic twins are vascular anastomosis, unequal allocation of blastomere during division, single placenta not able to meet up the demands of the growing fetuses, Increased risk of abortions, congenital malformations. This delayed growth of twins reflects a state of 'relative growth restriction' compared with singletons.

Growth discordance is another frequent problem in twin gestation. It affects 15-29 % of the twin pregnancies, more common in monochorionic twins. Cause a difference in the weight of twins. Difference is expressed as percentage of the larger twin's weight. The discordance of 20 % or more is considered significant. The reasons of growth discordance in MC twins, despite having same genetic growth potential, may be vascular anastomosis.

Unequal division of single placenta or congenital malformations.
Dichorionic twins are 90 % dizygotic, so the different
genetic growth potential may itself cause growth discordance.
Other causes may be suboptimal invasion of placenta or fused placenta.

Fetal growth restriction (FGR) is when the estimated fetal weight falls below the 10th percentile. FGR is very common in twin gestation, that being the important cause of increased perinatal morbidity and mortality. FGR can be concordant or discordant. Risk of FGR in dichorionic twins is double that of singletons. Risk in monochorionic twins is twice than that in dichorionic twins. FGR in twins may pose increased risk of Intrauterine fetal death (IUFD) and neurological abnormality due to chronic hypoxia and deprivation of nutrients.

When Singleton growth curve charts are applied to twin pregnancies, may lead to misclassification of growth disturbances in a higher proportion of cases, thus resulting in early delivery of the babies, resulting in increase in iatrogenic prematurity. Fetal growth velocity is particularly important in assessing fetal growth, rather than fetal size at a particular point of time. There occurs a decrease in growth velocity curve in twins, beginning before 30 weeks, accounting for 7% difference in median and the curve reaches 10 % at term gestation. When monochorionic twins are considered, the drop of the curve difference was even higher, accounting to 10 and 12 % respectively.

There is also a significant difference in fetal growth pattern observed in relation to fetal gender. the male fetuses have a 2.5% more weight than the females at any gestational age considered. There is seen a misclassification of relative growth restriction as high as 40 % in twin

pregnancies if we use singleton growth charts. The accuracy of intra uterine growth assessment for twins depends on establishment of twin specific growth charts.

FGR rate fluctuates between 18 and 46% if growth curve for singleton is used and it lies between 13 and 17% when twin-customized charts were used. The customized twin growth charts have higher positive predictive value for adverse neonatal outcomes in FGR twin babies than the singleton growth charts. The International Society of Ultrasound in Obstetrics and Gynecology (ISUOG) had also recommended the use of twin specific customized growth charts when assessing fetal growth of twin fetuses. Thus, choosing the appropriate growth charts has a important impact on the management of twin growth disturbances.

In addition to choosing the right appropriate twin specific customized growth charts, intensive fetal surveillance adds importance in providing essential antenatal care to twin gestation.it helps in a greater extent in reducing the adverse fetal outcomes in growth restricted twins. The modes of fetal surveillance are assessing the biometric variables, biophysical profile, Doppler velocimetry. The fetal medicine experts suggest the surveillance monitoring interval as every four weeks in dichorionic twins and every 2 weeks in monochorionic twins, starting at mid trimester, about 22 weeks. Hence, identification of fetal growth restriction early with the use of twin specific growth charts, intensive monitoring & surveillance and intervening at right time helps us to avoid the adverse fetal outcomes in twin pregnancy.

Conclusion

Twin pregnancies have a different growth pattern compared to singletons. The difference in growth velocity appears before 30 weeks and it becomes more pronounced reaching term. Also Twin fetuses experience a greater degree of asymmetric growth pattern compared with singletons. The estimation of twin growth with the customized twin specific charts provides better prognosis of adverse neonatal outcomes and also in avoiding iatrogenic prematurity comparing to the singleton growth chart.

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Article: 3

Multifetal Pregnancy Reduction

Dr. Chinmayee Ratha
MS(ObGyn) MRCOG(UK) FIMSA FICOG

Director & Lead consultant - Fetal Medicine, Resolution Fetal Medicine Centre, Hyderabad
Co Author: **Dr. S. SAVITHA**, Fellow in Fetal Medicine

Introduction

The incidence of multifetal births has risen in the last few years due to ART. Multiple pregnancies are associated with a significant degree of perinatal mortality and morbidity, preterm birth and increased risk of maternal complication such as HTN disorders, GDM, PPH and preterm birth, selective fetal reduction and discordant anomalies can give rise to clinical dilemma in management of multiple pregnancies.

Mono chorionic pregnancy specific complications such as TTTS, TAPS can pose additional complications compared to singleton pregnancies.

Fetal reduction:

It is the procedure that reduces the number of foetuses by one or more in a multiple pregnancy.

Selective termination applies to those pregnancies affected by discordant fetal anomalies or with severe fetal growth restriction with aim to improve prognosis of normal fetus.

Over past 25 years data from around the world have shown that pregnancy outcomes are improved by reducing no of fetuses in multiples. Cochrane review 2015: No RCT to inform risks and benefits of fetal reduction procedures in multiple pregnancies.

Indications:

- Uncomplicated triplet/quadruplet or higher order multiple pregnancy.
- Discordant anomaly or aneuploidy.
- Advanced TTTS (Stage 4)
- Severe early onset selective FGR
- TRAP
- Advanced TAPS (Stage 4)

Reduction in multifetal pregnancies is done in the following cases:

1. TCTA triplet pregnancy
2. DCTA triplet pregnancy
3. MONOCHORIONIC triplets
4. TWIN PREGNANCIES with special indications

1. In case of TCTA triplet pregnancy:

Management options in TCTA triplet pregnancies include Expectant management (allowing it to continue as TCTA triplet pregnancy) v/s Selective reduction. Recent systematic review showed that in TCTA to twin reduction risk of preterm birth was 17.3 % while in cases of expectant

management it was 50.2%. The rates of miscarriage were similarly (8.1% versus 7.4%).

Meta-analysis comparing outcomes of 796 triplets that underwent reduction v/s 899 expectantly managed. They noted that in cases of reduction, there was delivery at later gestational age, 60-70% reduction in early preterm delivery, Reduction in neonatal mortality, Higher Birth weight, Lower hypertensive disorders.

2. In case of DCTA triplet pregnancy:

This consists of one monochorionic pair, therefore the challenges in this pregnancy include

- Risk of monochorionic specific problems
- Technical challenges during selective reduction
- Chavera *et al* in their study noted, risk of miscarriage increased with the number of foetuses reduced, while the rate of preterm birth reduced with the number of foetuses reduced.

3. MCTA and MCMA triplet pregnancy:

These are rare and pose Challenges like TTTS, TAPS, Selective fetal growth restriction, Fetal loss

Indication of SFR in twin pregnancies:

- Discordant fetal anomaly
- Severe selective FGR
- Advanced TAPS or TTTS
- Severe Maternal cardiac disease

- Maternal request

Vierra *et al* in their study noted that: Reduction to singleton pregnancy has the following benefits:

- Higher GA at delivery,
- Lower rates of preterm birth
- No increased risk of pregnancy loss
- Reduced pregnancy complications and rates of caesarean delivery

Gupta *et al* in their study noted that risk of preterm birth was 10% as compared to expectant management (continuing as twins) which was 43%, while the risk of SGR was 23% in the reduced group as compared to 49% in cases continuing as twins.

Fetal reduction:

Determining chorionicity is important

Timing: 12-13 weeks

Why at this gestation?

- Allows time for most spontaneous miscarriages
- First trimester ultrasound to be performed – R/O major fetal abnormalities, markers of aneuploidy and risk calculation of common chromosomal anomalies
- 2nd trimester reduction has higher rate of miscarriage and preterm delivery compared to late first trimester reduction
- Features of aneuploidy
- Significantly small CRL

- All foetuses normal? – Consider Technical aspect:
  Most accessible fetus/ Closest to anterior abdominal wall or Furthest from cervix.

Procedures of SFR:

1. **Intra thoracic/Intracardiac KCL administration:**

- Not to be done in monochorionic pregnancy: Because of placental anastomoses which will affect co-twin.
- Procedure: Under U/S guidance intrathoracic or intracardiac inject of KCl, Fetal asystole within 1min of injection, confirmed by U/S and see cardiac activity in other fetus
- Success rate: 99.5 -100%
- Common issues: Degree of cramping, amniotic fluid leak
- Danger sign: Vaginal Bleeding – Clinically assess I/V/O procedure related risk of miscarriage

2. **Bipolar cord coagulation**

- Under continuous U/S guidance
- 10F disposable trochar into amniotic sac of targeted fetus
- Cord occluded with 3mm bipolar forceps by applying 30-50W for 30sec
- Cessation of blood flow confirmed by using color doppler
- Survival rate: 80%
- PROM and Preterm birth <32weeks: 20%

3. RFA (radio frequency ablation)

Principle

- Generating changes in alternating current at very high frequencies at tines of needle
- Causes agitation of tissue ions as they attempt to align to electric field
- Production of frictional heat
- High tissue temperature
- Tissue coagulation and necrosis

Procedure

- Under continuous U/S guidance,
- 17 Guage Radiofrequency needle inserted percutaneously into intrafetal portion of Umbilical cord
- All three tines applied
- Radiofrequency energy used to generate 110 Celsius all 3 times for 3 min

4. Fetoscopic and intrafetal laser ablation

- Described in 2014
- US guided laser ablation of pelvic vessels of one of monochorionic twins
- Cotwin death rate: 46% within 2weeks (Secondary to bleeding into placenta of dead fetus)
- U/S – Transverse section of lower fetal abdomen
- Color doppler to visualise Internal iliac arteries and intraabdominal umbilical vein

- 18-gauge needle inserted with tip adjacent to pelvic vessels
- Laser fibre then inserted into needle and advanced few mm beyond tip of needle
- Laser coagulation
- Fetal cardiac activity continues for several minutes. After 60min death of fetus confirmed

5. MICOWAVE ABLATION:

- Deliver energy through a coaxial antenna
- Antenna centred close to insertion of umbilical cord and deliver single microwave energy

Advantages:

- Technically easy
- U/S evidence of tissue coagulation seen immediately

6. High Intensity Focussed Ultrasound:

- Non-invasive technique into fetal therapy
- Principle: Targeted U/S energy is transmitted through abdominal wall and uterus through transducer to cause vessel occlusion
- Currently limited to TRAP and TTTS cases
- Disadvantage: Incomplete vascular occlusion

Article: 4

Infertility & Multiple Pregnancy

Dr. Aleyamma T.K.

MS (O&G), DNB , Post-doctoral Fellow (Reproductive Medicine & surgery CMC, Vellore)
Professor & Head dept of Reproductive Medicine & Surgery, CMC, Vellore

The aim of all fertility treatment is the delivery of a healthy baby. Over there is significant improvement of infertility treatment and over 9 million are assisted reproductive technology (ART) births. There are different treatment modalities exist like Ovulation induction (OI), controlled ovarian stimulation (COS), In-vitro fertilization (IVF). These treatment modalities are associated with complications as multiple pregnancies and OHSS which are preventable complications. Strict embryo transfer policies laid down and development of new freezing techniques as vitrification, in combination with extended culture has resulted in eSET (elective single embryo transfer) has significantly reduced the multiple pregnancy rates without affecting live birth rates in ART treatment cycles. Multiple pregnancy rates with non – ART treatments are still a greater problem. The American college of Obstetrics and Gynaecology (ACOG) recommends cancellation of cycles or withholding hCG when there are more than three follicles >/= to 15 mm to reduce multiple pregnancy rates. Use of mild regimens such as letrozole should be the initial step of OI modalities. Monofollicular ovulation should be the goal of OI. Low dose gonadotrophins should be used only of indicated and need close monitoring. Strict cancellation criteria, Aspiration of supernumerary

follicles and conversion to IVF should be explained to couple beforehand and made available once required. Once other strategies fail and treatment results in higher order multiple pregnancy Multifetal pregnancy reduction (MFPR) to twin pregnancy offers an option for reducing the risk for remaining foetuses.

Article: 5

Multiple pregnancies-Antenatal care

Dr. M.G. Dhanalakshmi
Professor & Senior Consultant, Department of Obstetrics & Gynaecology,

Sri Ramachandra University, Chennai

Introduction:

Multiple pregnancies throw challenges at every point - be it timely accurate diagnosis, screening for aneuploidies & anomalies, deciding for interventional procedures, need for joint antenatal management with fetal medicine unit to monitor growth, planning appropriate gestational age for delivery and counselling the parents for a possible extended hospital stay for both mother and babies.

Incidence:

Twin births account for majority of multiple pregnancies (97%). Among the twin pregnancies, dizygotic twinning accounts for nearly 70% and monozygotic around 30%. The incidence of Dizygotic twins varies as per geographical location whereas the incidence of monozygotic twins is constant, of late a surge is seen in monozygotic twins due to increasing ART procedures.

Etiology:

Several factors seem to influence the incidence of multiple pregnancies Advancing maternal age, Increasing BMI, ART Procedures, Asian African origin, increasing parity and possible diet pattern in some geographical areas.

Maternal risks:

The mothers experience more hyperemesis gravidarum, symptoms due to intrahepatic cholestasis. They are also more prone for gestational hypertension, gestational diabetes, anaemia, placental complications both placenta previa & abruptio placenta, pulmonary edema due to exaggerated hemodynamic alterations, rare conditions like AFLP & venous thromboembolism. They are also more likely to experience obstetric interventions like cervical encerclage or fetal medicine interventions especially in complicated monochorionic twin pregnancy.

Fetal risks:

All multiple pregnancies have a higher chance of spontaneous miscarriages or vanishing twin. Once they survive the this onslaught they are more likely to have growth restriction or face the consequences of preterm deliveries – both spontaneous & iatrogenic. They do have a higher incidence of congenital anomalies compared to singletons. In addition, monochorionic twins suffer from consequences like Twin-twin transfusion syndrome (TTTS), Twin anemia polycythemia sequence (TAPS), Twin reversed arterial perfusion sequence (TRAP), Selective fetal growth restriction (sFGR) &

Single fetal demise. Monoamniotic twins have unique complications like Intertwin cord entanglement & Conjoined twins.

Prenatal care:

Mothers with multiple pregnancies should be registered in high-risk antenatal clinics as soon as the diagnosis is made and their antenatal care should be individualized keeping the above maternal, fetal & neonatal risks associated with multiple pregnancies. The care of higher order pregnancies other than twins needs much more vigilance & commitment. The recommendations given below for twin pregnancies can be applied to higher order pregnancies with judicious alterations.

Weight gain: The recommended weight gain during pregnancy depends on pre pregnancy weight

Pre pregnancy BMI in kg/m ^{2}	Recommended weight gain
<18.5	No recommendation available
18.5 to 24.9	16.8 to 24.5 kg
25.0 to 29.9	14.1 to 22.7 kg
≥30.0	11.4 to 19.1 kg

Exceeding the recommendations makes mothers more liable to develop Hypertensive disorders & caesarean deliveries. After 20 weeks of gestation, weight gain should be approximately 770 gms/week for underweight women and 680 gms/week for normal weight women. Overweight and obese women may be recommended lesser weight gain.

Nutrition: The recommended calories intake per day during pregnancy depends on pre pregnancy weight. 40% of calories from low glycemic carbohydrates,40% from fat & 20% from protein.

	First trimester	Second trimester	Third trimester
Calorie requirements (kcal / kg /day)			
Normal BMI	40-45	As per recommended weight gain	As per recommended weight gain
Underweight	42-50		
Overweight	30-35		
Micro nutrient per day			
Iron (mg)	30	60	60
Calcium(mg)	1500	2500	2500
Vitamin D (IU)	1000	1000	1000
Folic acid (mg)	1	1	1
Magnesium (mg)	400	800	800
Zinc(mg)	15	30	30

The addition of low dose aspirin is recommended to prevent pre-eclampsia.

Physical activity: The treating obstetrician decides the type of exercises. Some restriction of strenuous activity is advised.

First trimester USG: The first-trimester scan done before 13+ 6 weeks should ideally help to assign GA, Chorionicity & amniocity. The combined test using USG NT, S.B HCG & PAPP-A done between 11- 13+6 weeks can provide fetus-specific risk assessment. Increased NT is a marker for Trisomies 21,13 &18, congenital malformations & also TTTS later. It is important to note that maternal serum biochemical markers may be affected by early loss of one or more embryos of a multiple gestation and after ART conceptions.

Anomaly scan: This is usually done between 18-22 weeks with fetal echo in monozygotic twins as there is higher incidence of cardiac anomalies identified. If cervical length is less than 25 mm, progesterone may be considered.

Growth scans: Even though growth pattern in first & second trimesters are not different from singletons, growth is generally slowed down in third trimester. In monozygotic twins, surveillance is more frequent beginning around 16-18 weeks every 2 weeks whereas in dizygotic it is done from 20 weeks onwards every 4-6 weeks. Same singleton growth scans are used to detect alterations in growth pattern. We can use EFW or AC to monitor growth in the second half of pregnancy. AC difference ≥20 mm, irrespective of GA has been reported to have 83% PPV to detect a difference in birth weight ≥20 percent. Abnormal placentations like placenta previa, vasa previa and valementous cord insertion are also noted.

Antepartum fetal testing: This will depend on the type of twinning-mono or dizygotic and also the target GA for delivery- weekly testing in dichorionic twins beginning at 32 to 36 weeks, in monochorionic diamniotic twin pregnancies beginning at 28 to 32 weeks of gestation; However, monochorionic monoamniotic twins are followed more closely. Modified BPP is sufficient in most uncomplicated twin pregnancies. Doppler studies may be needed in complications that generally are seen in monochorionic twins.

Special situations:

- Single fetal demise in monochorionic twins before 28 weeks of gestation, increased co-twin demise, preterm births, neurological sequelae in the surviving twin & reduction in birthweight.
- Preterm labour & delivery – We must remember that actual outcomes are not equivalent because the average length of gestation for singletons, twins, and triplets is approximately 39, 35, and 32 weeks of gestation, respectively. Nevertheless there is increased incidence of preterm labour with previous history of preterm births and twins in which spontaneous reduction had occurred. Judicious use of tocolytic drugs to administer antenatal corticosteroids is recommended. Magnesium sulphate to reduce the incidence & severity of cerebral palsy before 32 weeks is strongly recommended. Use of Arabin pressary in the setting of a short cervix is yet to be recommended widely. Hydoxyprogesterone caproate as a prophylactic can be recommended even though lacks robust evidence.
- Cervical cerclage is performed considering history and ultrasound monitoring.
- PPROM-complicates the management as it may end up in preterm births and in the event of prolonged PPROM might lead to chorioamnionitis

Conclusion:

Most of the uncomplicated twin pregnancies can be managed in the same lines as singleton pregnancies. Individualisation is needed whenever deviations are noted during surveillance.

TNFOG MARATHON CME ON

" MULTIPLE PREGNANCY "

Date: 12.11.2021 (Friday) | **Time: 4.30 - 7.30 PM**

Dr. Anjalakshi Chandrasekar
President , TNFOG

Dr. S. Sampath Kumari
Secretary, TNFOG

Dr. Vijayalakshmi Gnanasekaran
Treasurer, TNFOG

Chief Guest

Dr. Kananbala Yelikar

Session I

Judges

Dr. Nidhi Sharma

Dr. Vijayalakshmi

Speakers

Dr. Udhayakumari. T

Dr. Sivapriya. R

Session II

Chairpersons

Dr. Usha Vishwanath

Dr. Asha Rao

Speakers

Dr. Chinmayee Ratha

Dr . Aleyamma T.K.

Session III

Moderator

Dr. M. G. Dhanalakshmi

Panelists

Dr. J. A. Chitra

Dr. Sravani Chithra

Dr. Vanitha sri. K

Dr. P. Vairamala

Dr. Sulthana Naseema Banu N N

Dr. G. Jayamala

TNFOG MARATHON CME ON

" MULTIPLE PREGNANCY "

Date: 12.11.2021 (Friday) | **Time: 4.30 - 7.30 PM**

2 ICOG Credit Points Granted

Scientific Programme

DURATION	TOPIC	SPEAKERS
04.30 - 05.00 PM	**INAUGURATION**	
	Introduction	Dr. S. Sampath Kumari
	Inauguration	Tamil Thai Vazhthu & Kuthu Villaku
	Welcome Address	Dr. Anjalakshi Chandrasekar
	Chief Guest Address	Dr. Kananbala Yelikar
	Release of e-Newsletter (Issue 7) on "Multiple Pregnancy"	
SESSION I - YUVA SESSION **Chairpersons : Dr. Nidhi Sharma & Dr. Vijayalakshmi Kandasamy**		
05.00 - 05.15 PM	Pathophysiology of Multiple Pregnancy	Dr.Udhayakumari. T
05.15 - 05.30 PM	Understanding Foetal Growth in Twins versus Singletons	Dr. Sivapriya. R
	Q & A	
SESSION II **Chairpersons: Dr. Usha Vishwanath & Dr. Asha Rao**		
05.35 - 05.50 PM	Foetal Reduction in Multiple Pregnancy	Dr. Chinmayee Ratha
05.50 - 06.05 PM	Infertility & Multiple Pregnancy	Dr . Aleyamma T.K.
	Q & A	
SESSION III - PANEL DISCUSSION **Moderator: Dr. M.G. Dhanalakshmi**		
06.15 - 07.15 PM	" Mode & Time of Delivery in Multiple Pregnancy "	Panelists
		Dr. Chitra
		Dr. Sravani Chithra
		Dr. Vanithasri
		Dr. P. Vairamala
		Dr. Sulthana Naseema Banu N N
		Dr. G. Jayamala
	Q & A	
07.30 PM	Vote of Thanks	Dr. Radha Madhavi
Coordinator - Dr. S. Rajasri		

Coordinator

Dr. S. Rajasri

Vote of Thanks

Dr. Radha Madhavi

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