



NEWS BULLETIN (2017-18)

INDIAN SOCIETY OF PERINATOLOGY AND REPRODUCTIVE BIOLOGY

"A BRIGHT FUTURE BEGINS HERE"
Save Mother - Save Child - A slogan to the doorstep

A SALUTE TO OUR PRESIDENTS



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Patna (1978-81)



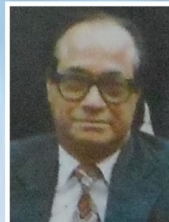
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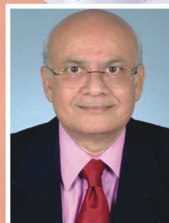
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News Bulletin
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Message

Dr. Milind Shah

President



Dear ISOPARBIANS,
Please accept greetings for new year 2018.
ISOPARB is always recognized as a progressive academic association of India. We are affiliated to FAOPS (Asia Oceania Federation of all Perinatology Societies). Our Newsletter editor Dr. Amita Sinha & Secretary General Dr. Meena Samant have

put lot of efforts for this newsletter.

Looking backwards at last two years, it gives me immense satisfaction and feeling of accomplishment as so much enthusiasm and support I have received from all of you and also all those new members.

We all will remember our beloved Dr. Rita Dayal, Secretary Journal whose sudden demise created a great vacuum in ISOPARB.

Our Journal is very popular because of untiring efforts for 8 years by Editor Dr. Arupkumar Mazhi and will be more popular with new active editor Dr. Hiralal Konar.. We had addition of almost 500 members in ISOPARB now.

We had wonderful start in February 2016 when I took over from vibrant past President Dr. Manju Gita Mishra at hands of our Nation's President Mr. Ramnath Kovind who happened to be Governor of Bihar in those days.

All existing chapters are doing wonderful work. We had many new chapters like Bokaro, Gurgaon, Vidarbh opened in last two years under able leadership of Dr. Jyoti Gupta, Dr. Ragini Agarwal & Dr. Sneha Bhuyar and many in pipeline. I salute all those who organized wonderful conferences, programs and CMEs in last two years from north to south and east to west. We also had many international activities in last two years in Singapore, Taiwan & Serbia. Dr. Rajul Tyagi from Lucknow, Dr. Arun Arora from Jammu, Dr. Chaitanya Shembekar from Nagpur were instrumental for these events.

We have started doing very ambitious social activity of donating high quality pulseoximeters to needy centers with the help of LIFEBOX and training people for safe surgery and safe anesthesia.

Last year National Conference at Delhi, Midterm CMEs at Baroda and Chennai were par excellence. Now we all are set to welcome you all at Mumbai for National conference 2018 in association with AFG (Association of Fellow Gynecologists). I must say big thanks to Dr. Mala Shrivastava, Dr. Divyesh Shukla & Dr. Vijayalaxmi Sheshadri for their dedication for these events.

I wish all the best to Dr. Suchitra Pandit, incoming President and let us join her hands to make ISOPARB more progressive.

I will also continue my journey as Deputy Secretary General of FAOPS to expand our horizons.

LONG LIVE ISOPARB.

Dr. Milind Shah
President ISOPARB

Dr. Meena Samant

Secretary General



Dear ISOPARBIANS

Greetings

It gives us immense pleasure in bringing out 1st ISOPARB bulletin in print. Keen interest was shown by our Past Presidents to whom we salute and dedicate this issue. We hope it will be a regular annual feature.

Vision 2020 for ISOPARB will include to make our journal IJOPARB indexed with high impact factor. Our editors are working actively in this direction.

We are working towards making our membership reaches the 4000-5000 mark with more city chapters coming up. Let's make pregnancy and delivery a very safe journey for all.

Lets work out towards bring out still birth registry and make perinatology and reproductive biology a concern for all.

"Coming together is a beginning; keeping together is progress; working together is success". Henry Ford.

Jai HIND
Long Live ISOPARB.
Meena Samant

Dr. Amita Sinha

News Bulletin Editor



Dear friends

Greetings from Patna

It gives me immense pleasure to share with you the first issue of ISOPARB News Bulletin.

Our organisation has been known for its active work in perinatal health. To fulfill the vision of ISOPARB, various chapters across the country have been working laboriously. Glimpses of their activities are included in this issue.

It is real privilege to have several dedicated mentors among us, guiding us at every step. This News Bulletin features articles written by these stalwarts of ISOPARB.

The 33rd annual conference of ISOPARB held at Delhi in April 2017 as well as mid-term CME held in Chennai in October 2017 is also being featured here.

I will be looking forward to your valuable inputs. I wish you all a very happy reading!

Long live ISOPARB

With warm regards,
Dr. Amita Sinha

**Education is the most powerful
weapon which you can use to
change the world.**

Nelson Mandela

Dengue infection in Pregnancy

*Rohit Bhatt; **Sonia Gola

* Chief, Dept. Ob. Gyn. Bhailal Amin General Hospital.

** Consultant Ob. Gyn. Bhailal Amin General Hospital



Summary

Viral infections transmitted by mosquitoes are on the increase all over the world but much more so in developing countries because of low protection against mosquito bite.



World health organization

(1) has suggested that 50-100 million dengue infections occur every year. The common viral infections transmitted by mosquito are dengue, chikungunya, Zika est. In most cases the outcome is uneventful but complications do arise in pregnant woman, which affect fet-materanl health. We as Ob.GYN experts must know the diagnosis and management of these viral infections. This would help in early detection and treatment of the pregnant woman

Introduction

Dengue is a mosquito transmitted viral infection that is common in most tropical and subtropical countries. It is estimated that 390 million dengue virus infections occur every year and about five lac need hospitalization. Dengue virus infection in pregnant woman requires special attention because of its effect on feto-maternal health. Current research suggests that dengue infection in pregnancy may cause preterm birth, still birth and low birth weight in infants born to mothers who suffered from dengue in pregnancy .Low birth weight is more likely to be due to shorter duration of gestation rather than impaired fetal growth in utero. Large proportions of dengue infections are asymptomatic and large number occur without symptoms.

Dengue virus is a small single-stranded RNA virus. It is transmitted by female Aedes mosquito. The mosquito usually lives in clean water and bites during the day .Monsoon season are ideal time for mosquito because of humidity around 80% and temperature range 25-30 degree Celsius. Incubation period is 4-10 days. The female Aedes mosquito deposits its eggs on moist surfaces just above the water line. Unfortunately; eggs can withstand desiccation and remain viable in dry conditions for more than a year. This prolonged survival is a major problem in prevention and control of dengue.

Symptoms

After the incubation period of 4-10 days, the illness begins. It has three phases febrile, critical and recovery.

Febrile phase. There is fever of sudden onset lasting 3-7 days and usually associated with headache, muscle and joint pain, flushing and retro orbital pain. There may be occasional rash

Critical phase. All dengue fever cases do not necessarily have this critical phase. It is due to low platelets count, there is leakage in capillaries causing hemoconcentration. Patient may develop hypotension, accumulation of fluid in pleural and peritoneal cavities. This is called dengue hemorrhagic fever (DHF). This is a serious complication which require hospitalization

Recovery phase starts within 3-5 days. Most patients recover following the dengue fever without complication, small number enters the critical phase

Diagnosis

The clinical diagnosis is not difficult in most cases. Since there is no definitive treatment, symptomatic treatment is offered. Following laboratory tests are performed to confirm the Diagnosis.

(1)Rapid ELISA based NS1 antigen test

NS1 is a gluco-protein available in the serum of patients during early stage of infection

The test has high sensitivity and specificity

(2)Dengue IGM-capture enzyme linked immunosorbant assay.

It detects Dengue specific IGM .It can be detected by day 5 of illness. The detectable IGM persists in circulation for 60 days

Dengue fever in pregnancy

The symptoms and treatment and outcome of dengue fever in pregnant woman are similar to those of non-pregnant woman.

There is no need to terminate pregnancy.(2)

It is suggested but not clearly proved if dengue fever can cause, pre-term birth, low birth weight babies or still birth. Keep the patient well hydrated and at rest. Keep 4 hourly temperature, pulse, Blood pressure, intake output chart, CBC every day and capillary refill time as needed.

Treatment during pregnancy

Paracetamol 500-650 mg should be given 3-4 times a day. (Do not exceed 4 grams/day). Avoid NSAID or Aspirin. Avoid steroids. Encourage oral intake of fluids, coconut water, kanji or fruit juice. Keep a watch on urine output. If there is vomiting, give iv fluids (normal saline). If pregnant woman develops hemorrhagic fever, admit her in the hospital. There is a risk of vertical transmission affecting the new born

Severe bleeding may complicate delivery. Avoid induction of labor during fever. Blood and blood products must be kept ready during labor. Trauma or injury should be kept to minimum. Ensure complete removal of placenta after delivery. Avoid intra-muscular injections as much as possible. Miso-prostol may be given to prevent PPH. Clinician must be vigilant to detect early features of complications. If there is vomiting, lethargy, narrowing of pulse pressure, low urine output and fall in platelet count, patient must be admitted.

Prevention

(1)If possible, avoid travelling in to areas where dengue fever is prevalent. If you have to travel, wear protective clothing and use mosquito repellants

(2)Using flying insect spray to kill mosquitoes' in dark cool places like closets, underbeds, behind curtains and in bathrooms

(3)Use bed nets preferably treated with an insecticide to prevent mosquito bite

(4)Remove the place where they breed remove stagnant water from coolers, old tyres, bucketys, plastic covers, plant trays and cover all stored water

Take home message

Dengue fever is a notifiable disease. Health department should be informed immediately. Suspect Dengue in each febrile illness .Rapid Elisa based NS1 test, CBC should be ordered.

Keep watch on warning signs .Keep blood and blood components ready if hemorrhagic fever develops. Keep patient well hydrated. There is no need to induce labor or terminate early pregnancy. Avoid NSAIDS and Steroids. Evaluate the newborn for congenital Dengue.

References

1 World Health Organization (WHO) Handbook on clinical management of Dengue.2012

2Kalyanrooj S, Nimanitya S. Guidelines for Dengue hemorrhagic fever. Bangkok Medical Publisher. 2004. page 78

Stillbirths: can we prevent it?

Dr. (Prof.) KAMAL BUCKSHEE

Former Professor and Head

All India Institute of Medical Science (AIIMS), New
Delhi, India

Stillbirth (SB) is a devastating complication of pregnancy. Each year about 3.2 million stillbirths (SBs) occur worldwide and India has the largest number. About 2.2 million occur during the ante-partum and 1.0 million during labour and birth. As a result, 4.2 million women are living with depression following previous SB. These deaths affect women, their families, caregivers, communities and society.



Definition of SB varies between countries. According to world health organization, SB is defined as a baby born dead at 28 weeks of gestation \geq with birth weight of 1000 gm \geq or body length of 35 cm \geq .

Can we prevent them?

These deaths can be prevented but to do so we need to know why, when and where do they occur? at home or on the way to facility, in the rural or urban setting or urban slum, presence or absence of skilled attendant, types of facilities available, quality of ante-natal and intra-natal care and emergency obstetric care.

A systemic review of maternal/paternal family history, personal/previous obstetric/current pregnancy history and investigations done during the ante-natal period so as to identify the possible cause/risk factors and gaps associated with SB.

Ante-natal causes/risk factors include maternal medical diseases/disorders (hypertension, diabetes, renal, hepatic, thyroid, cyanotic heart disease), infections (malaria, syphilis), reproductive tract infections, epilepsy, history of prior fetal losses/repeated abortions, fetal growth restriction, multiple/teen age pregnancy, poor nutrition, severe anemia, previous cesarean section, cholestasis of pregnancy, inadequate ante-natal care, thrombophilia (congenital/acquired), SLE, auto-immune diseases, obesity, smoking, drugs abuse, congenital and karyotype anomalies.

Women with a history of previous SB have a five-fold increase of SB in the subsequent pregnancy. Predicting SB is important so as to identify fetuses that require closer surveillance and timing of delivery to prevent SB. Low papp-A in first trimester of pregnancy and abnormal uterine artery doppler indices in second trimester are associated with three to four fold increase in risk of SB.

Intra-partum causes: Many SBs occur at home or on the way to the facility due to the absence of skilled birth attendant, emergency obstetric care and inadequate facilities, prolonged/obstructed labor, malpresentation, cord prolapse, placental abruption and asphyxia. Review previous/current labor and delivery events to determine the causes/risk factors. Verbal autopsy with the care providers to ascertain cause of death, chance of recurrence and possible means of averting them. When cause is found it can influence the care needed in subsequent pregnancy.

Fetal causes: Fetal growth restriction, infections, multiple gestation, hydrops, immune and non-immune, congenital, karyotype anomalies and gestational age at the time of SB. Psychological support and counselling is essential of the family and parents to prevent depression associated with the birth of a SB and to highlight the value of fetal autopsy, placental examination (gross and microscopic), genetic analysis to elucidate their role in the possible cause of SB. The result of these investigations would aid in the management of subsequent pregnancies and prevent recurrent stillbirths. Trained and experienced personnel in maternal/feto placental unit should be involved to perform fetal autopsy and placental examination.

India has the highest number of SBs in the world, the rates range from 20-66/1000 births in different states of India. More than 30 classification systems have been developed but are not suitable for adoption.

Study from Chandigarh, India by Newtonraj et. al. reported a SB rate of 16/1000 birth, ante-partum 68%, intra-partum 32%, hypertension was responsible in 18.2%, congenital anomalies 18.8% and growth restriction in 19.9%. 48% were due to fetal causes and maternal was 44.7%. Verbal autopsy interviews were conducted in Bihar, India. It revealed annual SB incidence of 21.2/1,000 births, ante-partum 54.5%, 68.9% delivered at a health facility, unexplained SBs 34.2%, obstetrics complications and excessive bleeding during delivery contributed to nearly 30%. According to Rajagopal et. al. 2017 study from Telangana revealed SB rate of 12.1/1000 births, 67% were responsible for preterm births and 15.1% intra-partum.

Measures should be taken to improve rates of skilled birth attendants and access to emergency obstetric care in rural areas and in urban slums including development of referral system apps for rural areas and urban slums. Verbal/fetal autopsy, gross and microscopic examination of the placenta, umbilical cord and membranes are mandatory to establish the cause/risk factors, reduce the chances of recurrence and decrease the number of unexplained SBs. We also need to know where, when and why these SBs are occurring so as to prioritize our training programmers, update our data and action plan to reduce/prevent SBs. Healthy diet, exercise/yoga, quality ante-natal and intra-partum care to be encouraged. For quality reproductive health, we need planning and preconception care, ensuring healthy start of pregnancy supporting safe birth and if SB occurs psychological and social support to the parents and family. In 2014, the World Health Assembly endorsed a target of 12 or fewer SBs per 1000 births in every country of the world by 2030. We also should endorse the same target for every state of India.

IUGR [Intrauterine Growth Restriction]

Dr. Jagdishwari Mishra

Ex Prof & HOD, PMCH, Patna



Definition: Intrauterine Growth Restriction is a term used to describe a condition in which fetal wt is < 10th percentile for their gestational age. These babies are often described as small for gestation age. A fetus

with IUGR may be born at term [after 37 wks] or prematurely [before 37 wks]. This incidence is close to 10% of all births.

Causes: fetal wt/growth is determined by genetic growth potential, health of the fetus, the capacity of the mother to supply adequate quality and quantity of substrates like oxygen, glucose and amino acids required for growth and ability of placenta to transport these nutritional substrates to the fetus.

Maternal causes are hypertensive disorders, chronic renal disease, diabetes, anemia and malnutrition, cardiac disease, multiple gestation, smoking, alcohol and abnormal placentation etc.

Fetal causes are chromosomal abnormalities, inborn error of metabolism and infections.

Dr. Rita Kumari Jha

Asstt. Prof, PMCH, Patna



Classifications: based on the presence or absence of symmetry among different anatomic structures and accordingly classified as type 1, 2 & 3.

Diagnosis: After full history and thorough examination the risk factors are identified like poor maternal wt gain, discordance between gestational age and uterine size, inability to assess uterine growth during pregnancy like obesity and early pre-eclampsia. Diagnosis is confirmed by USG and Doppler flow.

Management: general management includes bed rest, proper nutrition including L- arginine and low dose aspirin. Specific management will depend on gestational age, severity of growth restriction and how early the problem began in pregnancy. Careful monitoring is very necessary by fetal movement counting, NST, fetal heart rate monitoring, BPP, and serial USG and Doppler flow study including umbilical artery and middle cerebral artery flow. Depending on above tests patients are appropriately managed.

New born babies with IUGR often appear thin, pale and have loose dry skin. The umbilical cord is thin rather than shiny and fat. These babies may have problems at birth including decreased O₂ level, low APGAR score, meconium aspiration, hypoglycemia, difficulty in maintaining normal body temp, and polycythemia. Severe IUGR may result in stillbirth. It may also lead to long-term growth problems in babies and children.

Avoid harmful lifestyles, eating a healthy diet and getting ante natal check up regularly may help in decreasing the risk of IUGR. Early detection and management improve maternal and perinatal outcome

Induction of labor- when and why?

Dr. Nirmala Saxena

Ex Prof & HOD, NMCH, Patna



Induction of labor is defined as an iatrogenic stimulation of uterine contractions before the onset of spontaneous labor to accomplish vaginal delivery. When the benefits of expeditious delivery are greater than the risks of continuing the pregnancy, inducing labor can be justified as a therapeutic intervention.

Indications of induction of labor:

Hypertensive disorders of pregnancy, Postdated pregnancy, Premature rupture of membranes, Intra-amniotic infection (chorioamnionitis), Intrauterine growth restriction, Fetal complications (isoimmunization, oligohydramnions, nonreassuring fetal status), Maternal medical complications (APLA/DM/renal disease/SLE), Intrauterine fetal death.

However, physicians should decide whether labor induction is warranted on a case-by-case basis, after consideration of maternal and infant conditions, cervical status, gestational age, and other factors.

Contra indication of induction of labour: Vasa previa or complete placenta previa, Transverse fetal lie, Previous classical cesarean delivery, Active genital herpes infection, Previous myomectomy entering the endometrial cavity, Cephalopelvic disproportion, Previous rupture uterus and invasive cervical carcinoma.

Membrane sweeping : Prior to formal induction of labor, women should be offered a vaginal examination for membrane sweeping. If the cervix will not admit a finger, massaging around the cervix in the vaginal fornices may achieve a similar effect. At the 40 and 41 week antenatal visits, nulliparous women should be offered a vaginal examination for membrane sweeping.

At the 41 week antenatal visit, parous women should be offered a vaginal examination for membrane sweeping. Additional membrane sweeping may be offered if labor does not start spontaneously.

Setting and timing : In the outpatient setting, induction of labor should only be carried out if safety and support procedures are in place. In the inpatient setting, induction of labor using vaginal PGE₂ should be carried out in the morning because of higher maternal satisfaction. If induction fails, the subsequent management options include: a further attempt to induce labor (the timing should depend on the clinical situation and the woman's wishes) and caesarean section.

Ultrasound Dating in early pregnancy reduces incidence of post term pregnancy by 32-39% and consequently the need for labor induction.

Risks of induction : Maternal -Increased CS rate, Infection; Fetal -Prematurity, Sepsis, Asphyxia, Increased cost

Conclusions : Induction of labour should be performed only when there are clear medical indications for it and expected benefits outweigh its potential harms. Considerations must be given to the condition, wishes and preferences of each woman and consent must be taken. The indication for induction must be documented, and discussion should include reason for induction, method of induction, and risks, including failure to achieve labour and possible increased risk of Caesarean section. If induction of labour is unsuccessful, the indication and method of induction should be re-evaluated. Inductions should not be performed solely for suspected fetal macrosomia or because of patient or care provider preference. Institutions should have quality assurance programs and induction policies, including safety tools such as checklists, to ensure that inductions are performed only for acceptable indications.

Every woman should ideally have an ultrasound, preferably in the first trimester, to confirm gestational age. Women should be offered induction of labour between 41+0 and 42+0 weeks as this intervention may reduce perinatal mortality and meconium aspiration syndrome without increasing the CS rate.

Stem cells , Is it a boon ?

Prof. (Mrs) S.N. Tripathy

Ex Prof & HOD, Sambalpur Medical College

**“There is no path ,
A path is made by walking”**



Stem-cell therapy is the use of stem cells to treat or prevent a disease or condition. It is done by transplantation through local delivery or systemic infusion of autologous or allogeneic cells.. When a stem cell divides, each new cell has the potential either to remain a stem cell or become another type of cell with a more specialized function.

The types are : Embryonic stem cells, Induced pluripotent cells, Hematopoietic stem cells.

a. Bone Marrow b. Cord Blood.

Mesenchymal Stem cells, Fetal stem cells

The other classification is : Embryonic and Adult.

Embryonic stem cells: They are undifferentiated cells that can generate all the cell types of the body, and therefore hold the potential to cure a broad range of diseases and injuries. The sheep Dolly is the product of ES by reproductive cloning.

Hematopoietic stem cells: They may be derived from bone marrow or from cord blood. There are several types of BMTs. They are categorized according to the source of the stem cells.

- Autologous transplant means the stem cells come from the patient.
- Allogeneic transplant means the stem cells come from a donor.

Syngeneic transplant means the stem cells come from an identical twin.

The Hematopoietic stem cells were detected in Cord blood in 1974, and successful transplantation in 1988 . They are as good as bone marrow stem cells, if not better. The indications for its use are Leukemia, non Hodgkin's lymphoma, Anemia's like thalassemia, Sickle cell anemia, Inborn errors of metabolism and lifestyle diseases. More than 75 disorders are indications of CBT, like Heart Disease,, Diabetes, Muscular Dystrophy, Multiple Sclerosis, Alzheimer's, Parkinsonism, Spinal Cord Injuries, Lupus, in pulmonary diseases, kidney diseases etc. Both related and unrelated cord blood transplants can successfully treat children with hemoglobinopathies, correcting the defect. If the transplant is performed early in life, survivals are >80%. Type 1 diabetes has been shown to improve if treated shortly after onset with an infusion of autologous cord blood. Clinical trials are undergoing on cerebral palsy and other forms of pediatric brain injury.

Mesenchymal' stem cells are derived from Marrow, Cord, Amniotic fluid and membrane, Menstrual blood, Endometrium, Tubes, tooth pulp etc.

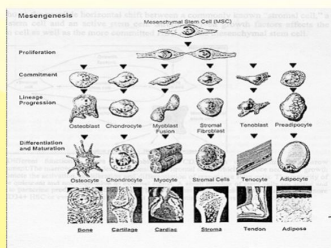


Fig I- Types of Cellular transformation of MSC.

Induced Pluri potent Cells (iPSCs)

Shinya Yamanaka et al coaxed a humble skin cell to become a pluripotent stem cell in 2007 .After reprogramming, the cells must then be redirected toward mature cell types to be therapeutically useful. Because the cells can be made from a patient's own skin, they carry the same DNA and so could be used without a risk of being rejected by the immune system.

iPSCs transplantation now treats sickle cell anemia, spinal cord injury, Parkinson's disease, hemophilia A, limb ischemia, acute myocardial infarction, peripheral vascular disease, diabetes etc. Fig II

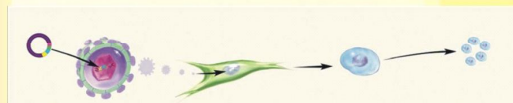


Fig II Generating Induced pluripotent stem Cells (ipsCs)

APPLICATIONS OF STEM CELLS-

Stem cell therapy is being used as the next cure for all ills. The vast potential shown by stem cells in treatment of diseases considered as “degenerative, incurable and irreversible” like diabetes, heart disease, spinal cord injuries, Parkinson's, Alzheimer's disease has brought them into the limelight. (Fig III) .

At present , the research is focused on sources and their utility in different disease processes .. Most of the research is now going on in Induced Pluripotency Cells.. Of all the obstacles faced by researchers trying to develop stem cell therapies, finding a noncontroversial supply of these omnipotent cells was, for many years, a particularly thorny problem.

Adult stem cells have plasticity, that is proved now and it is now documented that almost all the organs have stem cells of their own. Cord blood stem cells has also plasticity and they are now used in a host of diseases. The cord blood banking and cord blood transplantation is increasing like anything.

The mesenchymal stem cells are a rich, non controversial, inexhaustible source of primitive mesenchymal stem cells and can be differentiated into all types of mesodermal cells. Stem cells can delay menopause for ten to fifteen years and they can have a child up to 60 years.

Progress in stem cell research is now astonishing, Every day, a new frontier is conquered .Over 2,000 new research papers on embryonic or adult stem cells are published in reputable scientific journals every year. By 2020, we will be able to produce a wide range of tissues using adult stem cells, with spectacular progress in tissue building and repair. .Many studies on stem cells are in phase I and Phase II trials .Few are in stage III.

Still there are huge gaps about how stem cells go about doing their work in the body. So many logistics has to be looked into. But in my opinion, the future for stem cells is bright . Those of us, who have seen the beginning and the great stride of endoscopy, ultrasonography and IVF , no longer disbelieve the future of stem cells . If the former were the miracle of 20th century, the stem cell therapy will be the magic bullet of the early quarter of the 21 st century. The divide between science and religion has traditionally been wide and deep. When Louise Joy Brown was born in 1978 what a hue and cry. Now IVF is a household word. The promise of relief, deliverance from several diseases, solution to several mysteries still surrounding so many diseases, appears to be achievable and for real.

Stem cells pose a bright future for the therapeutic world by promising treatment options for the diseases which are considered as non curable. Stem cell therapy is a boon to mankind.

Stem cell research and stem cell therapy is the right step in right direction.

Obesity & Reproduction

Dr. Manju Gita Mishra

Ex. Prof, PMCH, Patna



Obesity is a Major Health Problem and most prevalent nutritional disorder of affluent nations, as also of developing countries which are undergoing rapid nutritional and lifestyle transition. It has broad and significant impact on many endocrinologic parameters. Substantial changes in lifestyle, e.g. greater consumption of energy dense

foods and inactive lifestyle are the predominant reasons for the ↑ in prevalence of obesity and related disorders.

WHO & CDC definition for adults Based on Body mass index (BMI) =: BMI of 25 or more - OVERWEIGHT; BMI of 30 or more - OBESE

Obese women have more infertility and are less successful at conceiving than women of normal weight. The outcome of pregnancy in obese women is also highly complex. Soaring levels of obesity in affluent and fast developing societies are expected to trigger a major new infertility crisis among women.

Endocrinological Changes in OBESITY Leading to Infertility Are...

- Androgen metabolism & circulating androgen levels in obesity
- Estrogen metabolism in obesity
- SHBG in obesity
- Growth Hormone & IGF Axis in Obesity
- Insulin / Glucose Homeostasis in simple Obesity

OBESITY related Hormones & their role in Reproduction:

LEPTIN & Reproduction- Circulating leptin concentrations are proportionate to adiposity, with more obese individuals having higher concentrations. Leptin's ability to reflect energy balance suggests that it may serve as the link between nutritional status and reproduction. A rise in maternal serum leptin levels after the administration of hCG and before ovum retrieval was correlated with a higher pregnancy rate. Thus, excessive leptin associated with obesity may impair reproductive function at the level of ovary.

ADIPONECTIN, OBESITY & IR - Insulin resistance and obesity are associated with lower plasma adiponectin concentrations and also Adiponectin is found to be lower in PCOS.

GHRELIN & Reproduction- Ghrelin is a signal to conserve energy by increasing appetite; leptin is a signal to expend energy. The connection between reproduction and the body's state of energy metabolism is now well established centering around the complex leptin ghrelin system.

Cytokines - Increased TNF α promotes insulin resistance and impairs follicular development. Circulating CRP is positively and independently associated with insulin resistance / hyperinsulinemia. Thus, elevated cytokine levels may contribute to infertility in this group.

OBESITY & Pubertal Ovulatory dysfunction -- Juvenile obesity associated with earlier age at menarche. Peri-pubertal and pre-pubertal onset of obesity associated with higher risk of oligo-ovulation and menstrual irregularities. Elevated BMI at age 18 is a risk for subsequent ovulatory infertility with or without a diagnosis of PCOS.

OBESITY, PCOS & Ovulatory Infertility - Obesity has substantial effects on manifestations of PCOS. 50% of overweight women have PCOS. Obese PCOS women have more marked hyperinsulinemia, Insulin resistance, Lower SHBG levels, higher levels of total and free testosterone and DHEAS, Decreased GH pulse amplitude, Increased LH pulse frequency. All these lead to anovulation and infertility.

OBESITY & IVF Success rate - IVF pregnancy rates lower in obese women compare to those of normal weight. This may be because obese women don't respond to fertility medications and have higher percentage of immature eggs. Obesity also is an independent risk factor for early pregnancy loss after IVF or ICSI, partly due to lower number of collected oocytes in obese women.

OBESITY & Risk of Spontaneous Abortion - Positive relationship between BMI and the risk of spontaneous abortion in infertile women who became pregnant after infertility treatment. Endocrinological and/or metabolic milieu associated with obesity operating through a functional state such as insulin resistance, can create hostile intra-ovarian or intra-uterine environment for the oocytes or embryos.

OBESITY & Adverse Pregnancy Outcomes- Obesity is a significant risk factor for adverse pregnancy outcome like Early miscarriage, Recurrent miscarriage, Still birth, Early neonatal death, Preterm birth, Shoulder dystocia, Increased operative morbidity, Ectopic pregnancy.

Obesity & fetal risk - Maternal obesity (BMI > 30 kg/m²) has significant detrimental impact on fetal development with an increased risk of fetal anomalies like Anencephaly, Spine bifida, Exomphalos, Cardiac defects (ASD or VSD), Orofacial clefts and Multiple anomalies. There is 7% increase in risk for fetal anomaly for each 1 unit increment in BMI above 25 kg/m².

Management of OBESITY: Key Strategies

Behavioral Strategies : Self monitoring, social support, Stress management etc.

Dietary Intake : Reducing calorie intake by 500 1000 kcal per day to reduce weight loss.

Physical activity : Moderate activity (brisk walking or jogging), 30 45 mins, 4-5 days a week.

Adjunctive Pharmacotherapy : Drug treatment for patients with BMI > 27 with other medical co-morbidities.

Surgery : As last choice when other modalities fail, BMI > 40 or between 35 40 with co morbidities.

Ovulation Induction - Weight reduction followed by Clomiphene citrate, Aromatase inhibitors : letrozole etc, Gonadotropins, GnRH agonists / antagonists.

An emerging area of interest is "inter-generational tracking" of high maternal body weight into second and subsequent generations. It is observed that high maternal weight results in not only an increased risk of metabolic disease but also perturbed reproductive functional in the offspring...!!!

ISOPARB 2017 CONFERENCE INDIA HABITAT CENTRE, NEW DELHI ON 7TH – 9TH APRIL 2017



The Annual Conference of ISOPARB was held at India Habitat Centre, New Delhi. There were 4 Pre-conference well attended Workshops on Fetal Medicine, Contraception, Neonatal Care & Adolescent.

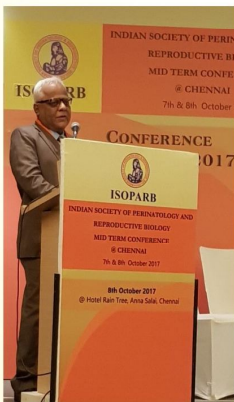
The highlights of the Annual Conference were three orations. Kamla Achari Oration was delivered by Dr. Tanaka, Conference Oration by Dr. Ranjit Akolker & S. N. Tripathi Oration by Dr. I. Ganguli.

There were Paper and Poster presentations during the Conference. The quiz was held and delegates from East Zone, South Zone as well as North Zone participated. The winning team was South Zone.

There was a gala inaugural function with dance performance by different young doctors and their children.



Mid TERM CME CHENNAI ON 7TH – 8TH OCTOBER 2017



The ISOPARB MID TERM CONFERENCE was organized at Chennai. Two workshops were held on AT RISK FETUS and PRACTICAL SKILLS IN OBSTETRICS. Dr Rajkishori Jha Oration was delivered by Prof S Rathnakumar whereas the key note address was delivered by Dr Milind Shah.

It was a satisfying academic meet of ISOPARB under the leadership of President ISOPARB Dr Milind Shah, the Secretary General Dr Meena Samant and the dynamic organising secretary Dr. Vijaylaxmi Seshadri.



Delhi CHAPTER

12th May 2017:
CME on "Menopause Management"



19th-20th July :
Gurukul classes



20-21 December 2017 :
Gurukul classes



22 & 23 July : 2nd All Odisha ISOPARB Conference at Bhubaneswar

Bhubneshwar CHAPTER



29th July : A CME on PCOS. Prof S N Tripathy & Prof Gangadhar Sahoo graced the occasion.

Burla/SAMALPUR CHAPTER



A CME on "Trics in obstetrics- is it obsolete?" & "Birth defects screening"



17th September : 5th annual conference of Burla / Sambalpur chapter



7th January 2018: First quarterly CME



PATNA CHAPTER

3rd JUNE 2017 : A CME was organised in which Dr Amita Sinha, Dr Shanti H K Singh and Dr Amit Kumar gave lectures on Fluid and electrolyte imbalance in pregnancy, HIV infection in pregnancy and Pediatric skin and atopic dermatitis respectively. Dr Punam Dixit and Dr Supriya Jaiswal moderated a panel discussion on Optimising outcome in Rh incompatibility.



3rd August 2017: School programme on Menstruation and associated problems



3rd August 2017: World Breastfeeding Week celebration at Asian Leeds School Patna



24th September 2017: A CME was organised in which Dr. Seema Thakur from Fortis Hospital Delhi gave talk on Invasive prenatal diagnosis and on Hydrops fetalis. Dr. Lokesh Tiwari from AIIMS Patna talked about Neonatal care and Dr. Hemali Sinha, AIIMS Patna moderated a panel on GDM.



30th Sep. 2017:
Training of Nurses on Safe Delivery.

6th January 2018: Organised Urban health camp with POGS



27th January 2018:
Organised Rural health camp at Daniyawan with POGS



4th February 2018: First quarterly CME was held with lectures on Hepatitis B in pregnancy and Management of infertility with a panel discussion on Antepartum haemorrhage.



Hyderabad CHAPTER

6th April-
CME on "Fertility"



4th June 2017 -
Seminar on "Fine Tuning of Contraceptive Usage":



1st & 2nd June- VIDYAJYOTHI 2017 Teaching Programme for PG'S at Apollo Hospital
Attended by more the 150 Postgraduates 4 Credit Hours by TSMC



17th August- CME on "Reproductive Biology"



14th September - CME on "Recent Advances in Perinatology"



21st SEPTEMBER 2017 Dr. HEMALATHA RANGACHARY
QUIZ. The Topic of Quiz this year was "Recurrent
Pregnancy Loss



28th & 29th October, MAATRIKA 2017 at Hotel Taj Deccan :
Organised MAATRIKA 2017 and theme of the conference was: "34
Weeks And Beyond : How To End The Journey Safely!" It was a
thumping Success with an attendance of more than 450 delegates.



14th December 2017 - CME on "Obstetrics"



4th January 2018 - CME on "What Is New In Gynecologic
Oncology And Menopause"



11th January 2018 - Eleventh Dr. Lourdes C. Fernandez Oration on
"Kindness, Compassion and Respect in Maternity Care: Turning
Silence into a ROAR."

31st January 2018 - ISOPARB YUVA Quiz on Genital malignancies

Lucknow Chapter

13 April 2017 - CME on Lupus pregnancy was held. Resource person was Dr. Amita Agarwal Senior Immunologist from SGPGI, Lucknow. CME was highly appreciated by audience for the practical tips.



3rd June 2017 - CME on AUB was held in which Practical approach to AUB at different ages was discussed.



SITAMARHI Chapter

2nd July, 2017 : A CME on RPL by Dr. Madhu Singh & Dr. Sanjay Verma on Asphyxias, Pathophysiology and recent trends in management.



10th August, 2017: With IMA Sitamarhi - Flood Relief Camp at Fatehpur Bhuthi



10th September: CME - Dr. Alka Pandey and Dr. Vinita Singh from Patna were the speakers.



Vidarbha Chapter

10th September, 2017: Installation ceremony of ISOPARB Vidarbha chapter



4th February, 2018: Critical care conference by ISOPARB with Nagpur Obstetrics & Gynaecology Society



ASSAM Chapter

15th July 2017 : Annual Meeting was held. New Executive Committee of ISOPARB, Assam Chapter, Hon. Secretary - Dr. Bibha Devi, Jt. Secretary - Dr. Nilakshi Phukan Kumar, Treasurer - Dr. Nabanita Deka.



INDORE CHAPTER

19th May 2017: First Meeting of Indore chapter ISOPARB was organised. Agenda of the Meeting was Introduction to ISOPARB, Measures to be taken for revival of the society and there was a Presentation on Anemia in Pregnancy



MUZAFFARPUR CHAPTER

10th December 2017: CME on "Overactive bladder." Dr. Mollinath chatterjee delivered lecture.



12th October 2017: Pad distribution amongst poor girls, school Khabra



Glimpses



ISOPARB 2017 CONFERENCE, New Delhi



Mid Term CME in Chennai



President visits ISOPARB office on 16th December 2017



DELHI Chapter : Public Awareness lectures on International Mother's Day



DELHI Chapter : Public Awareness lectures on Breastfeeding

"FOGSI First World Congress on Why Fetus Die In Utero?"
The Stadel Hotel, Salt Lake Stadium, Kolkata, West Bengal, India

ISOPARB SESSION
on 3rd Dec. 17 from 9-10 am in Hall A

TALK SHOW on THEME: INTRAPARTUM ACCIDENTS"
1. Cord Accidents 2. APH 3. Crash Caesarean/Delivery
4. Uterine Scar Dehiscence 5. Intrauterine Resuscitation
6. Intrapartum Monitoring: Tips & Tricks

SPEAKERS:

 Dr. Milind Shah	 Dr. S. N. Tripathi	 Dr. Manjusha Mishra	 Dr. Vinita Das
 Dr. Sudeep Chakraborty	 Dr. Pragna Mishra	 Dr. Sneha Bhuyar	



Mid Term CME CHENNAI

OBITUARY



Dr. RITA DAYAL
1952-2017



With great sadness, we pen that our dear Dr. Rita Dayal, Secretary General ISOPARB left for her heavenly abode on 8th March, 2017 after a brief illness in Patna. Born on 24th September 1952, she achieved many milestones in her career, a glimpse of which is given below.

- Consultant Obstetrician & Gynaecologist, Nalanda Medical College & Hospital Patna
- Secretary general, ISOPARB
- Secretary & Vice President, Bihar Obs & Gynae Society
- Joint Organising Secretary AICOG 2014
- Past President Rotary Patna
- Presented many paper & chaired many sessions in national conferences
- Invited as faculty, guest speakers in various conferences
- Had keen interest in high risk pregnancy

It seems her work here is done. She received a call, a sort of an offer you can't refuse, for an appointment from which she will not be returning. May her soul rest in peace.

Submit your Article in
Indian Journal of Perinatology & Reproductive Biology



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BRAIN TEASER

1. Gartner duct cysts persist as vestiges of _____?
2. At term singleton pregnant lady if moves from supine to left lateral position her cardiac output increases by _____?
3. Uterine receptivity for Blastocyst implantation is limited to days _____ to _____ days of the cycle?
4. Expand and explain "CHAOS"?
5. What is the best time to do Blastomere biopsy?



Dr. Mala Srivastava
Senior Consultant & Robotic Surgeon
Institute of Obstetrics & Gynaecology
Sir Ganga Ram Hospital
New Delhi-110060

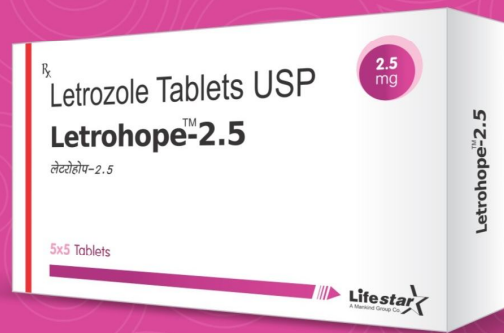
Thanking our Past President Dr. Susheelamma for encouraging young brains every year for quiz competition and for her generous contribution towards prize money.



- Answer:
1. Mesonephric or Wolffian duct.
 2. 20% or 1.2 litres/min.
 3. 20 to 24th days.
 4. Congenital High Airway Obstruction Sequence. A rare anomaly resulting from laryngeal or tracheal atresia.
 5. 6-8-cells stage when an embryo is 3 days old. It is the most commonly used technique for pre

Letrohope

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