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Newsletter

June 2018 | Issue 6

"Infertility"

President's Message

Dear FOGSIans

Greetings!

Fifteen percent of the worlds' population is subfertile. Infertility is on the rise and determining the cause is like searching for a needle in a haystack. It is not only management of the problem which is important, prevention can play a major role in decreasing the disease burden both on the patient and healthcare provision. We have to start many initiatives from a very young age itself and first one is a healthy lifestyle. We Fogsians every month are following a theme to create better awareness and this month our focus is on Infertility and Environment. "Go Green" is our motto and you can observe how small efforts are being taken to go "Paper-Free" and planting trees. We, as doctors must also understand the importance of ethical practices while treating our patients a proper QED management will help improve the scenario between the Doctor and patient immensely.

This year each conference is planned on a particular theme with great efforts and meticulous working. The team 2018 is taking extra care to be there for all members and also give opportunities to all the societies. We are also taking initiatives in Liaising with sister organisations nationally and internationally. Many NGO's are associating with us for streamlining many of our initiatives and I am very happy to say that each month is coming up with a new hope, many members are joining hands and proving that unified efforts will have stronger and wider impact.

"When a flower does not bloom, you fix the environment and not the flower"

Alexander Den Heijer

It is high time that we should start making small small efforts to rectify our environment.

Warm regards
Lots of Love
Om Shanti
Jaideep Malhotra

Achievement of an Obstetrician An Unsung Hero

Dr Shivani Jha (Dhanbad)

Everyone loves felicitation but when it comes from your fraternity, especially from the President of one of the largest professional organisation comprising of around 35,000 obstetrician and gynecologists, its the most special feeling. With 30 years of experience of working in a remote area of Coal mines, dealing with mostly labors and people who can't afford the basic medical facility, the only drive to work for the community has been the ability to touch as many lives as possible. For all these years it seemed that the efforts did make a lot of difference to people around but was not recognisable by society at large—I was proved wrong when my role model, a woman with an meticulous eye for perfection- Dr Jaideep Malhotra not only noticed the effort but felicitated in form of "Unsung Hero Award" at North Zone Yuva FOGSI at Dehradun on 28th April, 2018. I feel extremely humbled and honoured receiving this award, it has reinforced a new energy to work selflessly for betterment of our women population. All thanks to our President Madam, FOGSI, my family, seniors, and my patients for giving me the opportunity and trusting me to carry on my duties.

Report of NZYF 2018

Dr Shehla Jamal, Dr Sheeba Marwah

The bright sun in the valley of Dehradun, on 27th April 2018 witnessed the beginning of surgical rendezvous, as was promised by the organising team led by Dr Jaideep Malhotra (president FOGSI), Dr Pratima Mittal (organising Chairperson) and Dr Vineeta (organising Secretary). Excitement was palpable, and everyone was eagerly waiting for arrival of delegates.

This NZYF2018 conference was unique in many ways. With the aim of giving opportunity to maximum YUVAs, for the first time ever, the concept of delivering a talk by a Yuva faculty under the mentorship of stalwarts from their fields, was brought about in a conducive, interactive, and supportive environment. Consequently, two-third of the attending faculty was under the age of 40 years. This notion was very well appreciated by delegates across all ages, attending the conference, besides the stalwarts. **The conference received a whopping registration of near about 700, with around 112 free papers were received for oral and poster presentations, and 50 surgical videos from the young gynecologists of India.**

Sharp at 8 am the registerations started, with an overwhelming inflow of faculty and delegates. Soon after, the workshop sessions geared up, preceded by welcome. Hall 1 was jam packed as workshop on ABC of Critical care took off with breathtaking lectures by Dr Pratima, Dr jyotsana, and Dr Abha. Panel discussion on Obstetric Critical care enlightened everyone, and it commemorated with hands on training on CPR, ABG interpretation, Oxygen therapy, and a marvelous PPH drill. Everyone gelled over the lunch time, and could not wait to attend the family planning and safe abortion workshop, where the experts delivered the important messages on topics like MVA, Second Trimester abortion, post abortal contraception, and the most important of all, the medico legal aspects. The important points were highlighted by none other than Padam Shree Professor Usha Sharma.

Hall 2 was brimming with zealous delegates who were eager to learn about Fetal Medicine Skill and very upcoming topic, i.e, Cosmetic gynecology in the pre lunch session. Concepts of genetics and its uses and implications were cleared. The session was quite an interactive one, as the questions kept pouring and simultaneously cleared by eminents like Prof Narendra Malhotra and Dr Dipika Deka. Hands on simulator training for invasive prenatal diagnostics was a huge hit and garnered an excellent response. "Her unspoken Problems" was the topic of the day as it gave an insight of cosmetic gynecology from the Indian Perspective Post lunch was ICOG session on Cesarean Skills. All the workshops were exhaustive and a complete package.

As was expected from the dynamic lady, FOGSI president, Dr Jaideep Malhotra, conducted an impressive in promptu session for the YUVAs, and discussed the exemplary efforts, success stories of the true stalwarts of the gynecology. So, the audience were thrilled when they heard about the struggles, the inspirations from **Dr Shirish S Sheth, Dr Usha Sharma, Dr Narendra Malhotra, and Dr Jaydeep Tank**. I am sure that everyone like me, was speechless and motivated to be like them at the end of the discussion.

At the end of the day, the most awaited skit competition event was started. Most of the budding gynecologists proved their exuberant acting skills, and the whole hall was full of laughter and clapping sounds. The theme of the competition was Quality Ethics and Diginity, and the same were very aptly highlighted through these short dramas.

Also, a public forum was organized on saving the uterus, which was attended by nurses, anganwadi workers, and school girls. Besides, a health awareness walk on saving the girl child was organized on 29th April at 6 AM, which was a stupendous success with almost all the delegates and faculty participating in the walk. It gained quite a big media attention, just like the conference, and the prime objective of spreading awareness to save and educate the girl child among the common man was achieved.

Day Two

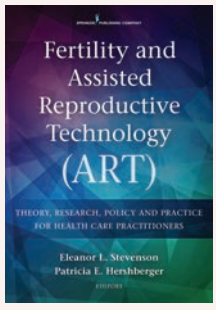
Day started earlier, with free papers running simultaneously in four different halls. This year a unique concept of Yuva faculty speaking along with the senior faculty mentoring them, started, and was a huge success. **"Good, Better, and Best in surgery"** was the presidential address theme, and Dr Jaideep Malhotra delivered it to par excellence. Conference oration by Dr Alka Kriplani on cesarean myomectomy cleared ever lurching doubts. Dr Shirish Sheth talked about deciding the route of vaginal hysterectomyin his keynote address. Yuva FOGSI oration by Dr Kavita Aggarwal on Quality, Ethics and Diginity was applauded by one and all. Various panel discussions, techniques of cesarean, suturing skills, endoscopy, hysteroscopy, and newly launched Manyata Project was also discussed. Public forum on Save the Uterus was conducted by Dr Sharda Jain, which saw the hall strength to its maximum. Yuva Public Awareness award was conferred to Dr Shehla Jamal.

Day 3

Day three started with save the girl child rally, organized by Dr Manisha, Dr Neharika, and Dr Archana Verma, and not to mention, it was a grand success. It was honored by the presence of president FOGSI and all vice Presidents of FOGSI and Dr Parag Biniwale. Public awareness awards for International Womens Day Camp and Slogan Competition were also given away. Day three was a mixed bag for the delegates, as topics ranging from rare entities like cesarean scar pregnancy, placenta accrete to newer concepts like clampless hysterectomy were discussed. Great visionary Dr Shailesh Puntambekar delivered a marvelous lecture on uterine transplant and received standing ovation from the audience. Dr VP Pailey, in his keynote address explained beautifully about internal artery ligation. Debate session preceded the valedictory function. At the end, it was a great academic experience as none of the topics related to basics and surgical skills was left untouched.

Fertility And Assisted Reproductive Technology: Book Review

Ritu Hinduja, Nikita Banerjee



One of the first books of its kind, Fertility and Assisted Reproductive Technology (ART) is a much needed and much awaited book to help allay the anxiety of not only patients but clinicians as well. The book is divided into four sections namely theory, research and review, policy, and practice. This book has indeed taken a bold step in discussing controversial topics in the light of changing trends and new age challenges. This is one of the few books that discusses the Rabbinic law and how these laws affect ART procedures. Models and modes of adaptation have been discussed to cover the psychosocial aspect of infertility. Roy Adaptation Model (RAM) as a template for comprehensive psychosocial theory of infertility has the potential to contribute to the understan-ding of stress experienced by infertile couple in a rather standardized way. Conceptualizing stress in three responses—stimulus, perception, and emotional response finds its roots in the famous Lazarus transactional model and Lobel et al. three faceted conceptualization. The author has also, with the help of numerous examples and case discussions, pointed out the emerging problems related to oocyte donation. Difficulty in finding self worth, being socially acceptable, breastfeeding and bonding with child has been brought to light to realize the importance of management of these pregnancies with psycho-logical support and help women restore their self-esteem and put to rest the apprehension. Infertility advocacy, cross border reproductive care, and cost effective treatment are other such topics that have been given the attention that they always deserved. The book addresses complex situations like the impact of fertility care on same sex relationship equality, the discussion of which is the need of the hour. Case study exemplar is a huge plus. As the title of the book goes, Fertility and assisted reproductive technology—theory, research, policy, and practice for health care practitioners, the author Eleanor Lowndes Stevenson and Patricia Hershberger have done justice to what they claimed to bring to the table. Although the book at first glance may look like just another mainstream clinical laboratory guide to assisted reproduction but it goes beyond that and takes the health care provider from the protocols and laboratory management to the patient's psych and resolve complex issues since it is important to know that not all cases can be proceeded in similar textbook fashion.

Granulocyte colony-stimulating factor (G-CSF) in infertility and reproductive medicine

Dr Shally Gupta

G-CSF is a recently discovered cytokine. It was first recognized and purified in mice in 1983. The human form hG-CSF was cloned three years later in 1986. Recombinant Human G-CSF is an 175 amino acid protein manufactured by recombinant DNA technology.

The biological activities of hG-CSF are mediated by a specific receptor on the cell surface of responding cells. This receptor (G-CSF-R) is present on myeloid progenitor cells, myeloid leukemia cells, mature neutrophils, platelets, monocytes, lymphoid cells, and some T cells and B cells. In addition to these cells of hematopoietic lineage, receptors for G-CSF are found in several non—hematopoietic cell types, including endothelial cells, placenta cells, trophoblastic cells, and granulosa luteinized cells.

G-CSF is sold under many brand names Filgrastim, Neupogen, Grafeel, Endokine, Emgrast etc among many others. It is marketed in vials or prefilled syringes. Routes of administration are subcutaneous, intravenous, or intrauterine. The dosages vary depending upon indication.

Clinical uses: Traditionally it is used for cancer patients undergoing chemotherapy or radiotherapy and those undergoing bone marrow transplant for improving neutrophil count.

Use of G-CSF in infertility or reproductive medicine:

1. Recurrent Miscarriage: The use of rG-CSF as a treatment option for couples with RM was first proposed by Scarpellini and Sbracia. Studies in animals and humans have shown that G-CSF contributes to successful reproduction by enhancing embryo implantation and ovarian function, contributing to reduced pregnancy loss. Though the results are promising the studies are small and few, larger RCTs are needed to support the results.

2. Recurrent implantation failure: Few small studies by salmassi et al., Rahmati et al among others have shown that use of G-CSF has benefited RIF patients by affecting fetomaternal interface.
3. Unresponsive thin endometrium:

- In 2011 Gleicher et al. described, for the first time, the use of rG-CSF for improvement of the endometrium in cases of women undergoing IVF with thin endometrium.
- Adverse effects: sensitivity, allergic reactions, bone pain, stomatitis, and nausea, vomiting. Rarely reported spenic rupture, vasculitis, and acute respiratory distress syndrome.
- G-CSF administration has beneficial effect on the clinical pregnancy outcome. Further cohort studies are required to explore the underlying mechanisms, the effects, and investigate the best route and dose of G-CSF administration.

Improving Environment—What we can do in our hospitals & clinics

Dr Prerna Keshan

Being the stakeholders of health care we doctors need to not only take care of our patients and attendants but also the surrounding environment as well. Today, health care facilities around the world need to have an aptly planned eco-friendly infrastructure.

A healthy and sustainable environment is the most necessary foundation for a healthy human body. The paradox or the sad story and the most interesting about health care is that we at hospitals deliver life saving care to our patients but at the same time produce biomedical waste that is all the way harmful for our patients as well as the community's health. It is the need of the hour that we change our mindset and become the torch bearers toward a healthy and safe environment to live in. It is us who can address this glaring problem by raising eco-standards of our hospitals and clinics, and creating awareness among the public masses.

With the following substantial steps we can move a way ahead toward achieving this goal.

- Hospitals since are referred to as "healing temples" should be kept clean and proper care to be taken on sanitation. Thereby decreasing the number of nosocomial infections too and a better patient compliance
- We can encourage healthy food habits in the hospital by supporting local farm and producers, reducing industrial food supply and purchase
- Recycling, reusing, and composting
- Waste produced in the hospital can make a smarter move toward reduced economic burden as well as improving the environment by diverting loads of medical waste from landfills by recycling, reusing ,and composting them

- In house detoxification
- Safe chemicals can be used within the hospitals and clinics for detoxification of biomedical waste. Vinyl free latex safe gloves, PVC free carpets, and flooring, flame retardant free furnitures can be a few basic things we can bring into our daily commodities toward achieving a better environment
- Enviroment partners
- "Go Green" is the slogan wherever we go. We, the doctor community are like anchors of the society and we can play a major role in addressing the public toward environment awareness. We can collaborate with local governmental bodies, NGOS, etc. and try to build a healthy eco-friendly system in our environment
- Renovation towards eco-friendly units:
  - Paperless record keeping
  - Energy conserving boilers
  - Green roofs/roof top gardens
  - On site power plants

  - Effluent treatment system (ETS) for on site treatment of all liquid waste
  - Building infrastructure to maximize amount of sunlight it receives
  - Materials used for constructing hospitals be eco-friendly and recycling steps should be prioritized. Not only constructing but also sustainability and proper maintenance of the same is the key
  - Reversible under floor heating system that can heat or cool the hospitals without the use of air conditioners and generators that can help offset Co_2 emissions
  - Instead of more conventional plumbing systems we can install water saving fixtures
  - Reflective roofs for energy conservations and minimizing use of air conditioners
  - Landscaping and gardening can be done outside hospitals premises and it increases the aesthetic delight and better recuperation of patients from stress
  - Improving indoor air quality significantly with proper ventilations for fresh air circulation. Planting species of plants inside corridors which release oxygen
  - Appointing green teams in the hospitals: The task of the team shall always be to improve the health of the environment thereby improving the health of the staff and the community.
- Natural light: A great emphasis can be placed on utilizing and enhancing usage of natural light during day time for illumination of labs, operation theatres, and patient rooms as well as corridors and hospital indoor areas. It can also help in reducing stress level of the employees and have a positive impact on patients recovery
- Pool transportation: To and from hospital, shuttle transport system can be adopted for shift wise resident doctors, staff nurse, and employees to decrease environmental pollution
- Cycle to work: A vast difference can be achieved if we start the practice with ourselves and inspire others to follow
- Silent hospital premises. It ensures better sleep quality of indoor patients with increased level of satisfaction. Noise free, horn free, and announcement free zones with information stations in every sector of the hospitals should be installed

- Celebrating special days and events with plantation of saplings in the hospital premises
- Leadership in Energy and Environmental Design (LEED) certification and rating system acknowledgement for newer construction and project
  - Leed Strategy includes
  - Site development
  - Water efficiency
  - Materials efficiency
  - Energy
  - Indoor environment quality
- Reward ritual: Maintenance policies can be taken up by rewarding staff employees who take special initiative toward environmental friendly steps and car pooling
- Education and Motivational Session for residents, staff, and patients can be arranged time to time to promote eco-friendly attitude.

The fundamental challenge toward developing eco-friendly hospitals is the lack of awareness in the medical fraternity and unavailability of trained architects in the concerned fields. Since, apart from conserving the nature, an eco-friendly hospital also enables a much faster patient recovery, we should aim at enhancing patient wellbeing, providing optimum care for the diseases and judiciously utilizing natural resources.

It is for the benefit of generation next that eco-friendly hospitals and clinics are required or else time is not far when health personals themselves will suffer from such morbidity that serving the society would become a burden to oneself. Our planet needs to be preserved for us to serve better. Our goal should be conserving environmental resources and creating the best healing environment for our patients. A world class medical service is that which conserves energy for the future generation on this planet.

Experience of Giving a Lecture in a conference

Dr Apoorva Pallam Reddy

The first time I was invited to give a lecture, my flow of thoughts was something as follows. To begin with, I was really excited that I would finally be a "FACULTY" and be given an opportunity to stand in front of my seniors, friends, and colleagues and give a talk. (You see, I have had the opportunity to hear some brilliant orators talk and always dreamt of being able to do that myself one day). The immediate next thought made me nervous - what if someone more intelligent or more well-read stood up and raised a question I really didn't know the answer for. Would I be ridiculed for it? But the most profound thought came toward the end. There will an audience- even if it is a single person- who will be listening to every word I speak and whose way of managing a patient might depend on what I communicate from that podium. Even after 4 years and 63 lectures from that first talk of mine, the only thought that keeps coming back to me is that third one. The initial euphoria eventually fades. You do begin to understand that at the end of the day it is ok not to know everything and great to learn new things from your audience. But what doesn't change with time is the responsibility you have toward your listeners.

As it's famously said, "With great power comes great responsibility". Every speaker at a conference truly has the power to influence the day to day practising standards of fellow colleagues. They also have a greater responsibility of bringing forward unbiased (just because you like it doesn't mean you can endorse it), evidence based (just because you have done it for years and got away with it doesn't mean it's right) and latest (if you have a study that is released last month, it's not fair to quote one that is released a decade ago) practise principles for the audience. They choose to spend their valuable time on you. Respect that and make that extra effort to compile everything for them in the simplest of the ways.

Most of the times when I am invited for a lecture the organizers used to pre assign a topic for me and even if I wasn't comfortable enough with the topic I used to oblige. With time I realized that this is actually a blessing in disguise. The more I was given new topics, the more I read of them, and the more proficiency I gained. Giving a lecture has, in a way, become a huge means of acquiring knowledge for me. I probably would be sleeping or watching a movie instead of downloading 100 articles and analysing them if it were not for the lecture (I am sorry I have to confess that I can only work under pressure and I completely envy people who read for passion).

My friends from other professions and sometimes even my family ask me, more frequently than not, what drives me in spending so much time, energy and money to go, and give lectures at different places. I only have one thing to tell them. The experience of giving a lecture in a conference is my way of learning. It's my way of learning recent advances and staying updated. Learning what my other colleagues from different parts of the country and world are doing. And most of all, learning to connect with the audience and impact their client's health. Sincere thanks to all those listeners who deemed me worthy of their time.

High DNA fragmentation Index case: Environment and Fertility

Keshav Malhotra

Patient Anjali Sharma (name changed to maintain privacy), a 28-year-old female came to the clinic (Rainbow IVF, Agra) with a complaint of pregnancy loss. She had previous two missed abortions and no live births till date. Duration of married life was 6 years, she had a normal regular menstrual cycles and a non-significant surgical history. Husband Omprakash Sharma who is 32 years old is a factory worker in the shoe industry. Semen analysis was conducted at Rainbow IVF and the reports showed a count of 40 million/ml with 15% progressive motility. The DNA fragmentation index (DFI) was tested by sperm chromatin dispersion kit, and 400 sperms were evaluated. The reports came back with a DFI of 56% which is significantly higher than the cut off range of less than 30%. A more elaborate history revealed that he worked in the tannery unit of the leather factory which could be a possible causative factor for the high DFI in this patient. The patient was then put on antioxidant therapy for 6 months along with some lifestyle modifications which included a better diet and some exercise. A repeat DFI was done after 6 months and that reported a decrease in DNA fragmentation which was now at 39%. DFI was still higher than normal. The patient was then counseled for PICSI (physiological intracytoplasmic sperm injection) (Fig. 1), the principle behind its use was that when a mature sperm reaches the hyaluronic acid (HA) rich cumulus complex surrounding the human egg, it binds and initiates the final fertilization. Only fully matured sperm have developed HA-receptors and can bind. The patient agreed to the treatment offered and we decided to go ahead with the case.

The patient was put on an antagonist protocol for ovarian stimulation. We recovered 13 oocytes from her and 12 M2s. Sample was collected 1 hour before the scheduled procedure and was prepared using discontinuous gradient centrifugation and loaded on the PICSI dish. Fertilisation check was carried out at 18 hours post ICSI and revealed 10 were 2 pronucei (2PN). Day 3 check revealed 8 grade 1 embryos at 8 cell stage and two 8 cell grade 2 embryos. We decided to freeze 5 grade 1 embryos and the rest were followed for a blastocyst stage transfer. On day 5, we had two blastocysts of which one was of top quality 4AA while the other was graded a 3BC. Both embryos were transferred and the patient was called on Day 14 for her pregnancy test. The test came back as negative. A frozen embryo transfer (FET) cycle was considered next and we decided to opt for another blastocyst transfer. The remaining five embryos were thawed and cultured to blastocyst stage. This time we had two top quality blastocysts and after a proper discussion with the couple we took a joint decision to transfer both. To the delight of everyone she came back with a strong positive on urine pregnancy test (UPT) and beta-Human Chorionic Gonadotropins (bHCG) level was 850. But such cases where DFI is on the higher side have an increased risk of having miscarriages. The patient was counseled accordingly and and her pregnancy was monitored carefully. This pregnancy was uneventful and an elective C section was done at 37 weeks. The delighted couple gave birth to a healthy 2.8 kg baby girl.

Origin of DNA Damage

The various etiological factors responsible can be accounted for within the categories in the figure.

The three major mechanisms that lead to DNA damage are abnormal chromatin packaging, reactive oxygen species (ROS), and abortive apoptosis.

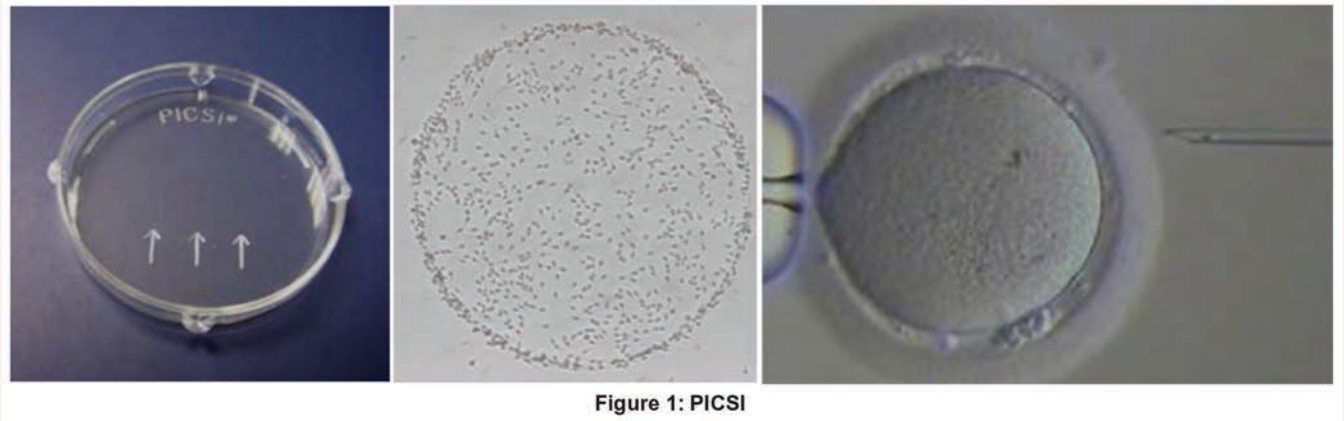
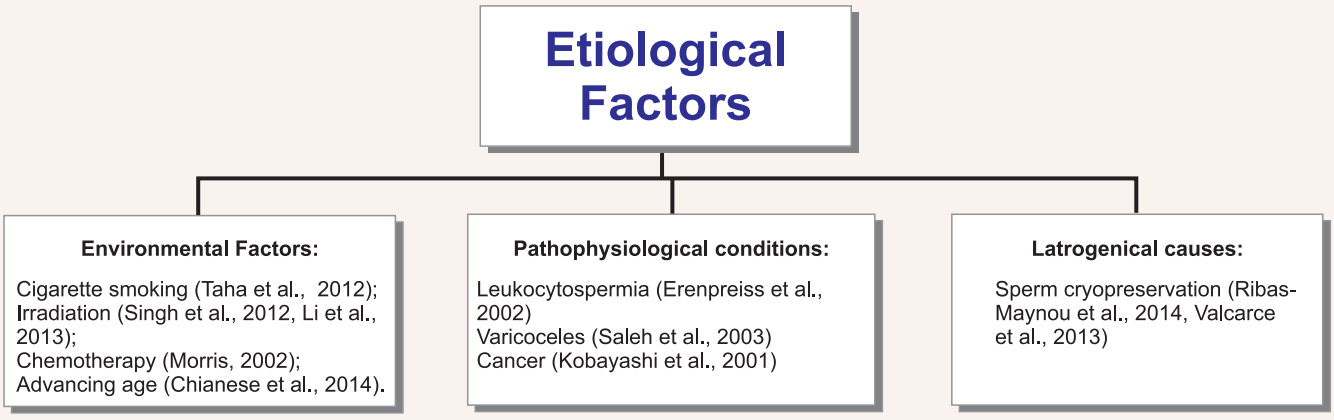


Figure 1: PICSI



Methods to Assess Sperm DNA Damage

Nowadays, there are batteries of diagnostic methods within easy reach to evaluate the DNA stability/integrity of the spermatocytes. Out of which three assays are popularly used among many laboratories, they are:

- Sperm Chromatin Structure Assay (SCSA)
- Single-cell Gel Electrophoresis Assay (COMET assay)
- Terminal deoxynucleotidyl transferase-mediated dUTP Nick End-Labelling assay (TUNEL assay)
- Besides the assays described above several other assays are used by some laboratories:
  - Sperm Chromatin Dispersion (SCD) tests
  - Acridine Orange Test (AOT)
  - Toluidine Blue Test
  - Aniline Blue Test.

These are easy to perform and cheap but clinical effectiveness and relevance still remains to be established.

All the above given tests calculate DFI percent (DFI-%) and/or high DNA stainability (HDS-%); where DFI-% is the percentage of sperm cells containing DNA damage and HDS-% is the percentage of cells with immature chromatin. The depiction of their various percentages of DFI and HDS is illustrated in the chart.

DFI%

< 15% DFI = excellent fertility potential
> 15 to <30% DFI = good fertility potential
> 30% DFI = fair to poor fertility potential

The statistically significant DFI threshold for subfertility has been established at > 30%
Normal full-term pregnancies are possible with an elevated DFI, but the higher the level of fragmentation, the greater the incidence of reduced term pregnancies and miscarriage

HDS%

< 15% HDS = normal
> 15 % HDS = above normal

Immature chromatin can be measured by high DNA stainability (HDS) and is associated with syngamy and poor IVF fertilization rates when in exceeds 15%

Treatments

Many interventions have been used to reduce the fragmentation in the genetic material of sperm. But still remains unclear as to which treatment plans will be effective for which patient. Some interventions are as follows:

- **Antioxidants for 6 months**
- **Sperm selection during ICSI**
- **Use of testicular sperm**
- **Varicocelectomy**

"Prevention is Better than Cure"

- To avoid smoking
- To avoid high temperature exposure to the testis
- To avoid using electronic connected to wireless network
- To include natural antioxidants in diet

Key Learning Points

- Recurrent early pregnancy loss has a high association with high DFI/male factor, as paternal factor contributes to early embryonic development
- Inadequate lifestyle is the most common etiological factor for high DFI
- DFI >30% is significant
- High DNA fragmentation can also result in poor quality embryos or recurrent implantation failure
- Antioxidant therapy should be given for at least 6 months so as to cover the spermatogenesis window
- Antioxidants can help in reduction of DNA damage
- PICSI is a great tool for such cases as it selects the physiologically normal sperms for injection
- Testicular sperm aspiration can also be done in such cases as it is a known fact that most of the DNA damage occurs in the epididymis
- Recurrent IUI failures or in cases of unexplained infertility, DNA fragmentation might be a probable cause and must be tested
- Prevention is always better than cure and proper awareness about lifestyle can reduce occurrence.

Tarot for June 2018

Aries: Increase in income, financial success indicated this month. your projects will take off and pending ones will be successfully completed. Travel on the cards. You will be happy, healthy, and satisfied. Great month for Arians.
Taurus: Good phase to continue, be careful of your emotions keep them under control. Good time for marriage and proposals. If planning a baby this is the right time.
Gemini: New projects to take off, meeting people in this connection will be very fruitful. If looking to expand your field of work great opportunities will come your way. Good health indicated.
Cancer: Work related stress, things not going as planned, hindrances, unexpected obstacles, and some problems at work are indicated. Try to think differently, new approach is required.
Leo: Vacation time, You can sit back relax and enjoy this month. Work will be stable, you will meet new people and new opportunities will come your way. Health will be stable.
Virgo: You might be getting lots of options this month so choose carefully what you want and what is good for you. If wanting to conceive the time is right. Health will be perfect so will your state of mind.
Libra: This month will be nostalgic for you, you will meet old colleagues and friends. Work will be good, some change at work place is indicated. Small health issues may bother you.
Scorpio: Travel might be stressful. Some work related problems might crop up. Keep a safe distance from your bosses. Mental and physical stress indicated.
Sagittarius: You might feel drained out and exhausted with activities around you, relax patience is the word for you. Take a back seat this month, enjoy fruits of the past, try not to start anything new this month. Look after your health.
Capricorn: This month promises to be good, you will be happy and satisfied with your work and personal life. If wanting to change job this is the right time, new business opportunities might come your way.
Aquarius: Celebration time, some good news coming your way, this month will be great for Aquarians will all round satisfaction.
Pisces: What ever you touch turns to gold, great month for you, reap the results of your hard work and enjoy to the fullest. Your desires will be fulfilled. happy times.
Rest is in Gods hands, have a blessed June.

—Deepa Kochhar (Noida)
kochhar.deepa@gmail.com

Dear FOGSIans,
Happy Summery May!
What a wonderful Ahmedabad conference we have just come back from. And yes, our much awaited International Conclave has started. This month we take a pledge to work toward our environment. And eco-friendly hospitals.

We also academically will focus on infertility in month of June. I take this opportunity to congratulate all the societies and committees who are doing such amazing work.

"Be the love you want to see and miracles will happen"

Dr Neharika Malhotra Bora
Joint Secretary
FOGSI

Few Important Links

- https://www.sciencedirect.com/science/article/pii/S1110569013000046
- https://academic.oup.com/humupd/article/15/3/265/750532
- https://academic.oup.com/humrep/article/31/12/2665/2730247
- https://www.shadygrovefertility.com/blog/why-shady-grove-fertility/sperm-count-iui-pregnancy-rates/
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2281839/
- https://infofru.com/health/pregnancy/infertility-management-recent-advancement/infertility-management-recent-advancement/
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- https://www.sciencedaily.com/news/health_medicine/fertility/
- http://www.healthynewage.com/10-exciting-advancements-in-infertility-treatment/
- https://www.independent.co.uk/topic/fertility-treatment
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Professor Dr S Sampathkumari

BLOCK YOUR DATES "2018"

Date	Place & Venue	Congress	Coordinators	Contact No.	Email
1–3 June	The Hotel Leela, Gurugram, NCR	International Women's Health Summit	Dr Narendra Malhotra, Dr Anupam Gupta, Dr SN Basu	9837033335 9837030836 9429617556	mnmhagra3@gmail.com, attbcagra@gmail.com, ssndbasu@gmail.com
16–17 June	Hotel Lemon Tree Premier, Exhibition Road, Patna	FOGSI–ISPAT GFMCON (Genetics & Foetal Medicine Conference)	Dr Narendra Malhotra, Dr Abha Rani Sinha, Dr Pragya Mishra Choudhary, Dr Saurabh Dani	9837033335 9835273668 9869069200	mnmhagra3@gmail.com, pragyamishra@hotmail.com, dr.saurabh.dani@gmail.com
29 June–01 July	Bangalore	Conference on Critical Care in OBS (FOGSI Endorsed)	Dr Shobha Gudi, Dr Alpesh Gandhi	9980140778 9825063582	sngudi@yahoo.co.in, gandhialpesh@gmail.com
28–29 July	Hotel Centre Point, Nagpur	Conference on Gestosis (FOGSI Endorsed)	Dr Suchitra N Pandit	9820416474	suchipan56@gmail.com
20–22 July	Hotel Radisson Blu, Udaipur, Rajasthan	YUVA FOGSI West Zone (Art & Craft of Vaginal Delivery)	Dr Lila Vyas, Dr Madhubala Chauhan, Dr Lata Rajoria, Dr Sudha Gandhi, Dr Nupoor Hooja	9829029039 9352506105 9828086792 9413417037 9828025302	lilavyas_149@yahoo.com, yuvafogsiwest2018@gmail.com
4–5 August	Brilliant Convention Centre, Indore	BREASTCON	Dr Kawita Bapat, Dr Anju Dorbi	9826055666 9826657666 9826057666	bapatkawita@gmail.com, info@breastcon.com, anjudorbi@gmail.com
17–19 August	Manesar	Leadership Summit & Capacity Building	Dr Jaideep Malhotra, Dr Neharika Malhotra Bora, Dr Deepak Gupta	9897033335 8055387886	jaideepmalhotraagra@gmail.com, drjaideepmalhotra@gmail.com, dr.neharika@gmal.com
7–9 September	CK Convention Centre, Vijaywada (Andhra Pradesh)	YUVA FOGSI South Zone (MIDLIFE Management)	Dr Jayam Kannan, Dr Avimeni Sasibala	9382828429 9848128252	yuvafogsisz2018@gmail.com, drjayamkannan@rediffmail.com, sbavirneni@gmail.com
15–16 September	Agra	Ian Donald Course	Dr Narendra Malhotra	9837033335	mnmhagra3@gmail.com
22–23 September	Mumbai	FOGSI MCM	Dr Jaydeep Tank, Dr Madhuri Patel	9820106354 9869042132	drjaydeeptank@gmail.com, drmadhuripatel@gmail.com
14–19 October	Rio, Brazil	FIGO Rio	Group Travel to Rio, Dr Narendra Malhotra	9837033335	mnmhagra3@gmail.com
27–28 October	Ganesh Shankar Vidyarthi Memorial Medical College, Kanpur	Women Health for Women Empowerment Conference	Dr Meera Agnihotri, Dr Kiran Pandey, Dr Kalpana Dixit	98380 04050 9415050322 9838202087	drmeeraagnihotri@rediffmail.com, dr.kiranpandey@gmail.com, kalpanadixit17april@gmail.com
16–18 November	Hyderabad	ICOG Conference	Dr Shantha Kumari, Dr Parag Biniwale	9848031857 9822023061	drshanthakumari@yahoo.com, parag.biniwale@gmail.com
22–24 November	Sikkim Manipal Institute of Medical Sciences, Gangtok, Sikkim	YUVA FOGSI East Zone (Gynaecological Malignancies)	Dr Rajat Kumar Ray, Dr Hafizur Rehman	9438391319 9733400336	ezyf2018@gmail.com, rajatkuray@rediffmail.com, dr_hafizurrose86@rediffmail.com
8–9 December	A.L. Mudaliar Auditorium, IOG, Egmore, Chennai	FWCON-2018 Adolescent Conference	Dr Jayam Kannan, Dr Sampath Kumari	9382828429 9382828429	drjayamkannan@rediffmail.com, drskumari@yahoo.co.in

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December

January

Bacterial vaginosis: Risk of Adverse Pregnancy outcome

Dr.Arif A.Faruqui , Clinical Pharmacologist

Bacterial vaginosis (BV) is a complex clinical syndrome characterized by alterations in the normal vaginal flora and a malodorous discharge when symptomatic.[1]

Bacterial vaginosis is present in up to 20% of women during pregnancy. The majority of these cases will be asymptomatic. Most women identified as having bacterial vaginosis in early pregnancy are likely to have persistent infection later in pregnancy.[2]

In pregnancy, BV has been associated with adverse outcomes such as miscarriage, premature rupture of membranes, preterm birth, and low birth weight.[1]

The babies can suffer from problems related to their immaturity both in the weeks following birth such as breathing difficulty, infection and bleeding within the brain as well as problems when growing up such as poor growth, chronic lung disease and delayed development.[2]

Perinatal mortality is high in India and a major contributor for this is preterm delivery and associated low birth weight. ***Ascending uterine infection from the lower genital tract the due to bacterial vaginosis (BV) has been implicated as an important causative factor for many pregnancy complications namely preterm labor (PTL), preterm premature rupture of membranes (PPROM) chorioamnionitis and endometritis.***

Association of BV with adverse outcomes in pregnancy: Meta-analysis conducted to study about adverse outcomes associated with bacterial vaginosis including over 30,000 women from 32 studies showed that ***bacterial vaginosis approximately doubled the risk of preterm delivery in asymptomatic patients as well as significantly increased the risks of late miscarriage and maternal infection.***[2]

In a study conducted on 200 women in Lok Nayak Hospital (New Delhi), it was found that among the cases of BV, 59.6% had adverse maternal and/or fetal outcome. A ***7.5-fold increased risk of late miscarriage and 3.22-fold increased risk of preterm labor and/or delivery was observed.***[3]

One study examining several pregnancy outcomes related to ***BV diagnosed during the first trimester of pregnancy reported a 2.6-fold increased risk of preterm labor, a 6.9-fold increased risk of preterm delivery and a 7.3-fold increased risk of preterm, premature rupture of the membranes.***[4]

Another study found that ***BV diagnosed in the second trimester*** was associated with an increased risk of preterm delivery and premature rupture of the membranes and that ***BV accounted for 83% of the attributable risk for preterm birth.***[5]

Studies have shown that the risk of an adverse outcome is particularly high in a patient with previous miscarriages have a positive vaginal smear for BV in early pregnancy.[6]

Although bacterial vaginosis has been shown to be an independent risk factor for these complications, many health care professionals still consider bacterial vaginosis more of a nuisance than a genuine fetal-maternal threat.

Variation in the incidence rates of BV during pregnancy: In a cohort study, 1,006 pregnant women between 16-28 weeks' gestation were screened for BV (Nugent's criteria) and for lower genital tract infection. Prevalence of BV was 11.53% and was associated with an increased risk of preterm birth (PTB) and premature rupture of membranes (PROM). BV accounted for 82.53% of the attributable risk for PTB.[5]

In a study conducted on 200 pregnant women, 38.5% were found to be have symptomatic BV and it was also noted that incidences of preterm labour was more in untreated cases.[7]

Challenges associated with BV based on trimesters: Studies have demonstrated that the more advanced the gestational age at testing, the lower the detection rate of vaginosis and the lower its predictive value for preterm delivery.[8, 9, 10]

When should the screening for BV be conducted during pregnancy?

It appears that infection with bacterial vaginosis in early pregnancy (second trimester) conveys a greater risk for complications than infection with bacterial vaginosis in late pregnancy.[11]

However, a positive test for bacterial vaginosis in early pregnancy may be a poor predictor for the development of preterm birth, preterm labor and premature rupture of the membranes.[4]

Based on increased risk, ***CDC guidelines recommend screening early in the second trimester.***[12]

Limitations of existing therapy:

Topical clindamycin vaginal cream is ineffective in reducing the rates of preterm birth.[9, 13]

In fact, such treatment actually increases the presence of vaginal Escherichia coli, an organism known to increase the risk for preterm birth.[14, 15]

Topical metronidazole gel has not been evaluated in the context of bacterial vaginosis during pregnancy. Topical antibiotics usually eradicate local bacterial vaginosis infection, ***but do not reduce prematurity sequelae because of the lack of access to the upper genital tract.***[14, 15]

Oral metronidazole and metronidazole combined with erythromycin have been shown to reduce pregnancy complications associated with bacterial vaginosis.[14, 15]

But because ***metronidazole use is contraindicated during the first trimester***, only women in mid to late pregnancy can be treated with the drug.

Although pregnant women with bacterial vaginosis obviously have an increased risk for pregnancy-related complications, it is unknown whether therapeutic intervention decreases the rate of specific fetal-maternal problems for all pregnant women.

In a study conducted in 200 women of late first trimester of pregnancy, most frequently occurring species were found to be Lactobacillus crispatus and Lactobacillus gasseri, followed by Lactobacillus jensenii and Lactobacillus rhamnosus.[16]

Recent reports indicate that exogenous strains of probiotics are useful in reestablishing a normal healthy vaginal flora and through judicious selection and delivery of probiotic strains to mitigate and eliminate the vaginosis.[17]

Are probiotics safe during pregnancy? Probiotics do not appear to pose any safety concerns for pregnant and lactating women.[18]

In-vitro studies have suggested that certain specific strains of lactobacilli are able to inhibit the adherence of Gardnerella vaginalis to the vaginal epithelium and/or produce H2O2 (hydrogen peroxide), lactic acid and/or bacteriocins, which inhibit the growth of bacteria causing BV.[19]

A positive smear at mid trimester (score ≥4) in pregnant with previous preterm delivery doubles the risk of recurrence. For women with a history of previous preterm birth there is some suggestion that treatment of bacterial vaginosis may reduce the risk of preterm pre labour rupture of membranes and low birth weight.[6]

Conclusion: The reproductive health of a woman is vital not only for her general health, but also for that of her partner and child.[17]

Bacterial infections can affect pregnant women from implantation of the fertilized ovum through the time of delivery and peripartum period. They may also affect the fetus and newborn.[6]

Symptomatic pregnant women with confirmed bacterial vaginosis should be treated.[20]

Guidelines from the Centers for Disease Control and Prevention (CDC) recommend treating asymptomatic high-risk pregnant women with bacterial vaginosis.[12]

In women at risk for preterm delivery an adverse outcome is more likely if bacterial vaginosis is detected in the first trimester.[6]

Treatment of bacterial vaginosis in pregnant women reduces the rate of preterm birth.[14, 21]

Probiotics should be considered as part of the approach to disease prevention and as an adjunct to antimicrobial treatment.[22]

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