



*Mogs for Women*  
Our speciality is you

The Mumbai Obstetric & Gynecological Society

# MOGS MATTERS

31st August 2020 | Issue 3



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[www.mogsonline.org](http://www.mogsonline.org)

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## MANAGING COMMITTEE & YC REPRESENTATIVES 2020-2021



## Past Presidents, Office Bearers & Trustees



## **President's Message**

Dear friends

It gives me great pleasure to bring to you the third issue of our innovative and now extremely popular E-newsletter, 'MOGS MATTERS'.

This monthly newsletter brings to you all the latest updates which are relevant to you in your daily practise. There is also focus on 'Fit is it" our mantra for the year. Also mind games to keep your mind sharp and a lot more. The editor Dr Kedar Ganla and all the contributors have made a lot of effort to bring you concise information and creative content and we are thankful to them.

I am sure you enjoyed the unique 'Youngistan' conference -By the young for the young at heart conference and the many focussed webinars we did in the month of July 2020. I am sure the 'Pearls of wisdom' videos which you are receiving regularly are adding to your knowledge..

In august we bring to you our digital PG training programme-The NA Purandare practical training event which has hundreds of young doctors tuning in, our outreach programmes and many webinars. On 30th august we host the Conflict to Clarity conference on the digital platform with many outstanding international and national speakers.

I really look forward to interacting with you on many different platforms this year-through newsletters, webinars, facebook events, small group meetings and many more, till the situation of the pandemic settles down and we can have larger conferences and meet again.

I request all of you to support MOGS V CARE AND SHARE Program and donate generously through our online portal or bank transfer to MOGS. Many supporting activities for our gynaecology colleagues who are COVID warriors are being carried out through this.

Thank you once again for all your support over the years and look forward to a wonderful year at MOGS.

Stay safe ,stay healthy.

Best wishes

### **Rishma Dhillon Pai**

M.D. , F.R.C.O.G (UK), D.N.B, F.C.P.S, D.G.O., F.I.C.O.G  
President MOGS.

Asst. Treasurer - International Federation of Fertility Societies (IFFS)

President 2018-19 - Indian Society for Assisted Reproduction (ISAR)

President 2018-19 - Indian Association of Gynaecological Endoscopists (IAGE)

President 2017 - Federation of Obstetricians & Gynaecologists of India-(FOGSI)





## **Editors Message**

Dear Friends, Seniors and Colleagues,

At the outset, let me wish you all the best of health and happiness in these troubled times. We are all trying our best to adjust to the 'new normal', facing challenges and making solutions that we would have never thought possible. However, the pandemic has been a wake-up call for us. It has tested our abilities to stand up again after taking a blow. And left us with a memory that we cannot take the simple things in life for granted.



To celebrate our march towards regaining our life back, I proudly present to you the July & August issue of our monthly newsletter, MOGS matters. This issue will be focussed on the management of recurrent pregnancy loss, with articles covering the anatomical, immunological, genetic and unexplained causes of recurrent pregnancy loss. We have tried to keep these articles as specific as possible, so as to give you crisp take home messages that you can use in your daily practice.

This month has seen a lot of important events: The Youngistan conference, which was the first ever conference organised entirely by the youth council of MOGS. The energy and enthusiasm with which they executed this event as their own is, in itself, a testimony to the fact that the future of this organisation is in dependable hands. We also had the meeting with Heads of Departments of various municipal and government medical colleges, and we strive to strengthen our bond with them for better patient care. Through our ongoing program – 'V care and share', we are trying our best to support our residents and consultants who are working selflessly at the frontlines. Our CME activities continued with outreach programs and Dr NA Purandare teaching programs for post graduates.

But this issue has yet another highlight from our young guns, some of whom are part of the youth council of MOGS. In the last decade, gynaecology has evolved into various defined sub-specialities, each requiring a distinctive training and dedication to master. Recognising the dilemma faced by our post graduates, we decided to have a series on "The road after PG: Been there, done that". This includes a personal account of some of our youth council members who chose to specialise in endoscopy, IVF, and others who specialised in oncosurgery and fetal medicine. We hope that their journey and their advice will inspire and educate others who wish to follow the same path, but do not know how.

Lastly, we hope to liven up your spirits with puzzles, games, recipes and more by our members. We hope these will refresh your mind and prepare you for what lies ahead tomorrow with new zeal!

Wishing you the best in life always

### **Dr. Kedar Ganla**

MD, DNB, FCPS, DGO, DFP, FICOG

Consultant fertility physician & Director- Ankoor Fertility Clinic

Jt Clinical Secretary, MOGS



## **Mogs V Care & Share**

### **Dr Anahita Chavan**

MD, DGO,DFP,FICOG

Former Prof and HOU Seth G S Medical College and KEM Hospital

Secretary MOGS

Second Joint Assistant Editor JOGI



MOGS extends a helping hand to our frontline healthcare workers. Our members have been kind enough to donate generously to this noble cause of supporting our colleagues who are leading the battle against this dreaded disease. We would like to thank the following members for their support. **Dr. Hrishikesh Pai, Dr. Rishma Dhillon Pai, Dr. Shobhana Mohandas, Dr. Shrikant Purandare, Dr. Dhaval Belvi, Dr. Nandini Ram Babu**

The MOGS V Care and Share Program is continuing its efforts in helping frontline workers and patients during the Covid pandemic.

In the last month, we focused on:

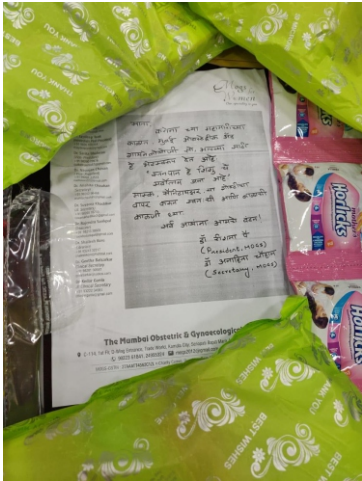
- Income generation through private donations
  - We were able to raise an additional Rs. 1 Lakh from private donors, through sms campaigns and personal appeals
- Distribution of care packages to breast feeding Covid positive and negative mothers
  - 200 packages were distributed to select BMC teaching hospitals as part of the World Breastfeeding Week celebrations.
  - These packages contained masks, hand sanitizers, soap and protein powder sachets, along with a note in Marathi encouraging mothers to breast feed
  - This was done through our own funds along with donation of protein powder sachets by Abbott
  - Dr. Reena Wani and Dr. Madhuri Mehendale along with Youth Council members Dr. Pradnya Supe and Dr. Pradnya Chengade helped in this activity
- Distribution of care packages to our resident doctors
  - Our major activity in August was to focus on the health, immunity and nutrition of resident doctors who are working tirelessly during the pandemic
  - We distributed 330 care packages to residents in all the major public and teaching hospitals - KEM, Sion, Nair, JJ, Cooper, Wadia, Bombay Hospital, Somaiya and DY Patil
  - Each package had healthy non - perishable snacks like chikki, oats cookies, peanuts and non-fried snacks which we purchased through our own funds
  - Youth Council members Dr. Bhumika Kotecha Mundhe and Dr. Nidhi Shah helped with this activity
  - This activity was supported by Zuentus who added surgical face masks, caps, sanitizer, and a month's supply of zinc tablets to each package
- Support to Family Planning Association of India (FPAI)
  - FPAI has been doing excellent work through the pandemic and have continued to offer all FP services through their centres in Mumbai to more than 5600 clients
  - They appealed to us for help with protective equipment
  - We donated 50 PPE, 50 N 95, 20 face shields and 200 surgical masks to them which were greatly appreciated

The fight is not yet over and we will continue to make a small but meaningful difference in the coming months through our V Care and Share Program.

**World breastfeeding week**

**Distribution of 200 care packages to BF mothers**

**Nair Hospital**



**Sion Hospital**

**KEM Hospital**



- Healthy oats cookies • Lite chivda
- Peanuts • Chikki



**Sorting and packing 330 bags**





**Cooper Hospital**



**J J Hospital**



**Wadia Hospital**



**Bombay Hospital**



We are grateful to these members for their generous donations. Kindly continue to support MOGS V CARE & SHARE. We encourage our members to contribute whatever they can to this noble cause. Donations can be made via our website [www.mogsonline.org/vcareshare/](http://www.mogsonline.org/vcareshare/)

Online payment gateway on MOGS website

<http://mogsonline.org/vcareshare/>

## **MOGS V Care & Share**

MOGS extends a helping hand to our frontline healthcare workers and patients.  
Support our efforts - contribute generously - if not now, when?

**NEFT Details of MOGS**

Name as per Bank Account	<b>The Mumbai Obstetric &amp; Gynecological Society</b>	RTGS/NEFT/IFSC Code	<b>BARB0JACOBC</b>
Bank Account No	<b>24480100012858</b>	GST Certificate	<b>27AAATT4562C1ZL</b>
Bank Name	<b>BANK OF BARODA</b>	Pan card	<b>AAATT4562C</b>
Bank Branch	<b>JACOB CIRCLE BRANCH, Mumbai 400 011</b>	SAC CODE	<b>998599</b>
MICR Code	<b>400012092</b>		



## Mogs App- Version 2 Launch

MOGS app was launched initially in the year 2018 under the leadership of the then MOGS president Dr. Bipin Pandit with the idea of having all MOGS activities to go digital.

- MOGS app version 2 was launched the Youngistan conference. The new and updated version has many new features including application for MOGS membership, events calendar, access to previous orations, monthly newsletter and members directory.
- There is a section for interesting videos which members can submit to the MOGS office and it will be available for viewing on the app.
- MOGS also introduces monthly quiz where winners will collect points and the winner at the end of six months will get an attractive prize.
- There is also Case of the Month section in which members can submit their entries of interesting cases to the MOGS office.

We invite all members to download the app and engage in MOGS activities with the new and improved version 2 of MOGS CONNECT app.

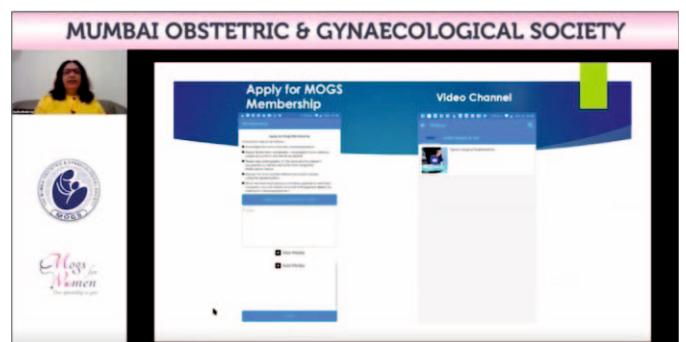
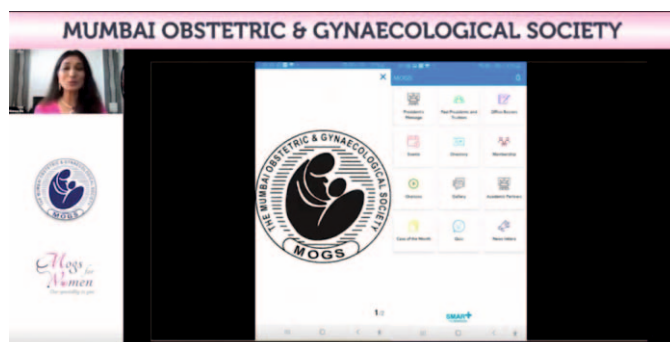
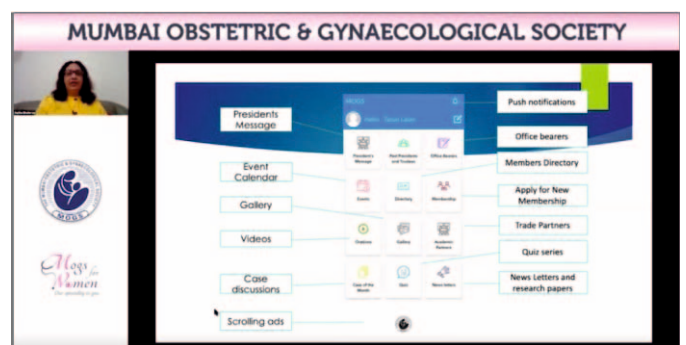
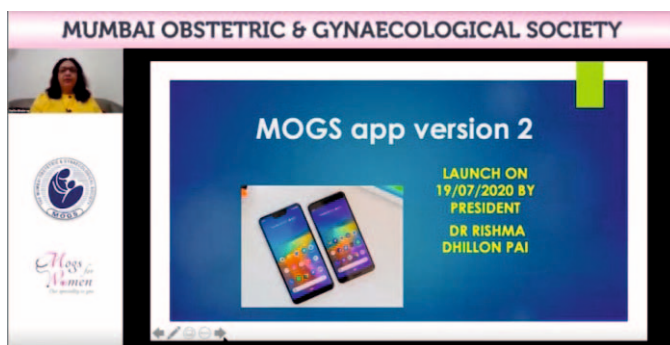
Click here for MOGS App

Android:

[https://play.google.com/store/apps/details?id=com.smarthumanoid.mogs&hl=en\\_IN](https://play.google.com/store/apps/details?id=com.smarthumanoid.mogs&hl=en_IN)

iOS

<https://apps.apple.com/in/app/mogs-connect/id1380675239>



Click here for MOGS Twitter Handle :

<https://mobile.twitter.com/mogshq>



MOGS  
@MOGSHQ

Dear Colleagues and Friends,  
Block your date and time:8th August  
2020 from 4pm to 6pm. Register  
FREE NOW at [togwebinar.com/  
webinar98/](http://togwebinar.com/webinar98/)  
@MOGSHQ presents an informative  
#TOGWebinar on "Successful  
Outcomes In Ovarian Dysfunction."  
Listen to the Expert Dr.Jyotsna  
Pundir, UK talk (1/2)



25 views

14:32 · 07 Aug 20 · Twitter for iPhone

## MOGS Flag

### FLAG FOR MOGS

**GREEN:** Balance, harmony, growth. Green is the color of nurturing and healing.

**BLUE:** The colour of trust, responsibility, honesty and loyalty. Trustworthy

**PINK:** Represents compassion, nurturing and love. Pink is feminine, caring and thoughtful

**WHITE:** Is the colour of perfection. It's the colour of new beginnings. Purity

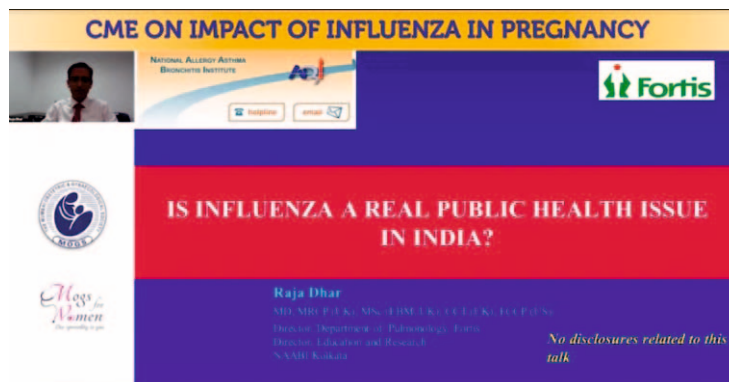
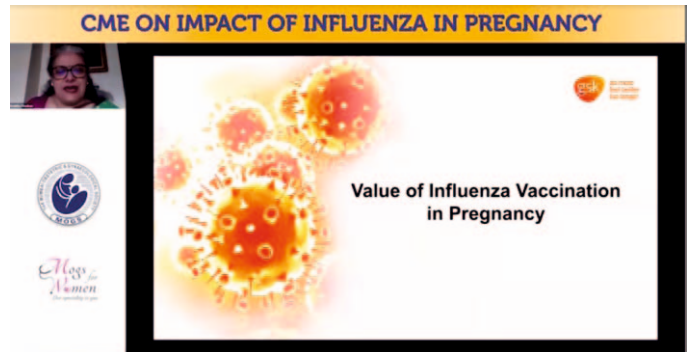
Dr. Rishma



**Mogs News**

**1) MOGS CME on "Impact of Influenza in Pregnancy" on Saturday 11th July, 2020.**

Topic	Impact of Influenza in Pregnancy
Date and time	11th July, 2020.5-6.30 pm
Master of Ceremonies	Dr.Shreya Prabhoo
Chairpersons	Dr.Vaishali Chavan from Pune, Chairperson of FOGSI Perinatology Committee Dr.Kalyan Barmade from Latur, FOGSI Chairperson of Public Awareness Committee.
Inflenza -a public health issue in india	Dr. Raja Dhar (Pulmonologist from Kolkata),
Impact of Influenza in Pregnancy	Dr.SuchitraPandit,
Myths of Vaccination in Pregnancy	Dr.AnahitaChauhan.
Question & Answer session	moderated by Dr Parikshit Tank
Total attendance	262
Educational Grant	GSK





## 2) Experts Views on Intrauterine Insemination

Venue	Zoom meeting webinar
Date and time	12th July 2020 : 11am - 1pm
Esteemed Guests	Dr. Rishma Pai, Dr. Anahita Chauhan, Dr. Rajendra Sankpal
Speakers	Dr. Kundan Ingale, Dr. Jatin Shah, Dr. Manish Banker, Dr. Kedar Ganla
Master of Ceremonies	Dr. Jiteeka Thakkar
Talks	Speakers highlighted on the following topics <ul style="list-style-type: none"> <li>● Investigations</li> <li>● Evaluation before stimulation for the couple</li> <li>● Ovulation Induction in normal, hypo &amp; hyper Responders</li> <li>● Luteal Phase support</li> <li>● Clinicians perspective in IUI .</li> </ul>
Panel Discussion	Conducted by Dr. Rishma Pai on the questions being put up by the viewers and delegates . More than 30 questions were discussed & answered by the faculty during the session
Total registrations	227
Total attendance	170
Educational Partner	Abbott



### 3) Report of HOD zoom Meeting Conducted by MOGS

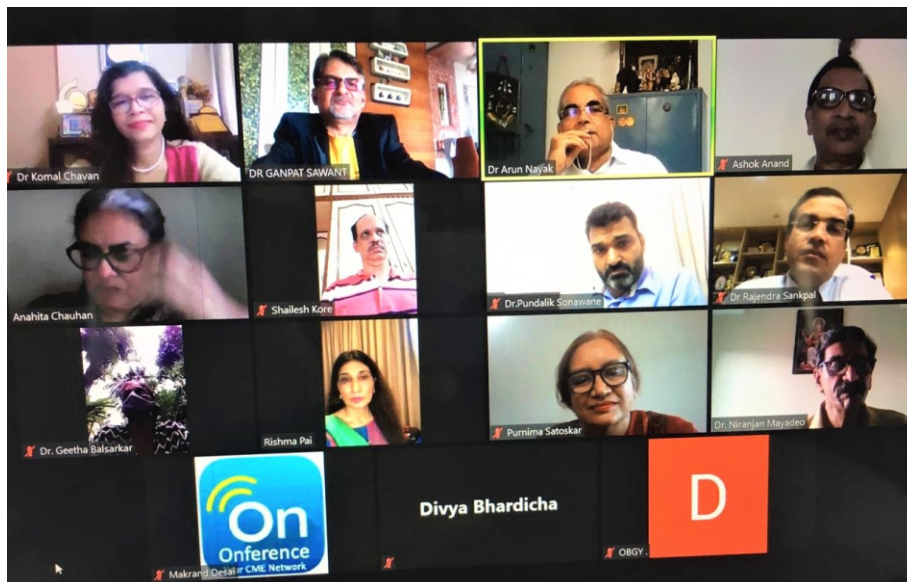
We had prestigious HOD meeting conducted by MOGS for the first time on Zoom platform due to the Covid era, on Saturday 18th July 2020 at 6.00pm.

The Conveners were Dr. Purnima Satoskar, Dr. Ganpat Sawant & Dr. Komal Chavan.

Meeting was attended by all the medical colleges HOD.

Name	Hospital
Dr. Rishma Dhillon Pai	Mogs President
Dr. Anahita Chauhan	Mogs Secretary
Dr. Rajendra Sankpal	Mogs Treasurer
Dr. Purnima Satoskar	Convener
Dr. Ganpat Sawant	Convener
Dr. Komal Chavan	Convener
Dr. Ashok Anand	J J Hospital-HOD
Dr. Shailesh Kore	Nair Hospital- Representative
Dr. Niranjan Mayadeo	K.E.M. Hospital HOD
Dr. Arun Nayak	LTMG Hospital HOD
Dr. Geetha Balsarkar	Nowrosjee Wadia Materinity Hospital- Representative
Dr. Sneha Shirodkar	R N Cooper Hospital HOD
Dr. Sriram Gopal	D Y Patil Med. College, Navi Mumbai HOD
Dr. Pundalik Sonawane	Somaiya Medical College HOD

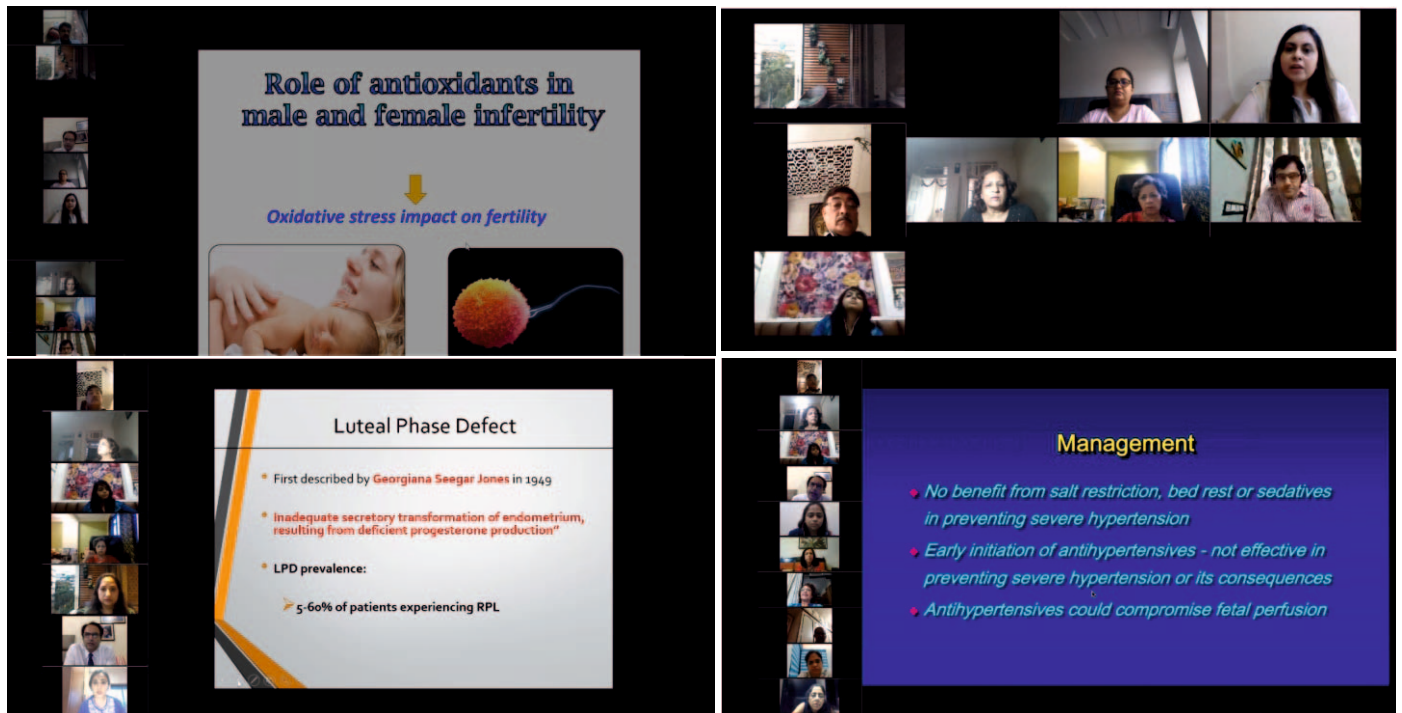
Main agenda of the meeting was – Covid 19 Situation in different medical Colleges and what MOGS can do to for smooth functioning of ObGyn department with their residents in handling Covid patients. Each HOD gave their first hand information about handling the Covid patients and challenges faced by them. All HOD were eager to help all MOGS members to reduce the maternal mortality and morbidity in their day to day practice. MOGS under the able leadership of Dr. Rishma Pai has volunteered to donate Covid essentials and neutraceuticals to all the residents.



**4) MOGS Outreach Webinar**

Date and time	Saturday, July 25, 2020, 6-9 pm
Conveners	Dr. Sujata Dalvi, Dr Ameya Purandare, Dr. Priya Thakur
Educational grants from	Spectra Division of Sun Pharma
Chairpersons	Dr. Neelang Shah, Dr. Kinjal Shah
Antioxidants in Infertility	Dr Unnati Mamtora
New Generation Oral Iron"	Dr Kekin Gala
Chairpersons	Dr Sudha Marwah, Dr Kunjal Bathija and Dr Ashok Kumar
Nutrition in COVID Pandemic	Ms NaazendehMecklai
Role of Vaginal Progesterone in High Risk Pregnancy	Dr. PriyaVora Thakur
Non-contraceptive Benefits of COCs	Dr SaritaBhalerao
Panel Discussion on Therapeutic Implications of HDP	<b>Moderators-</b> Dr. Sujata Dalvi and Dr. Ameya Purandare <b>Panelists-</b> Dr Shailesh Kore, Dr Reshma Rao, Dr Prema Kania, Dr Shilpa Agarwal, Physician Dr Manish Mavani and Intensivist Dr Gunjan Chanchalani.
Total attendance	67

Prize winners of MOGS Masti - **Dr. Riddhi Doshi and Dr Kinjal Shah**





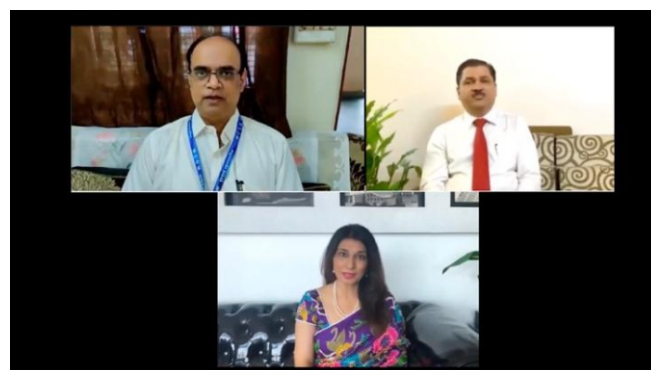
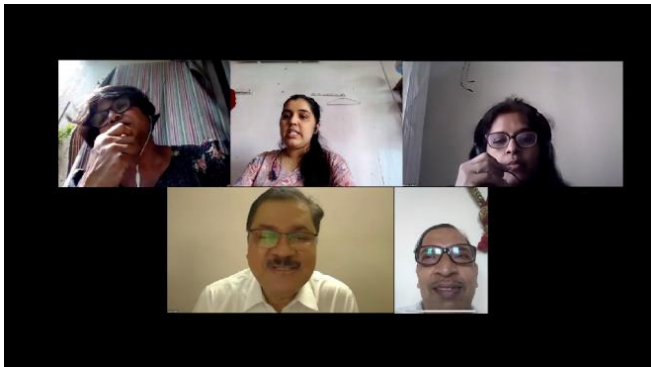
**5) Second Mogs Dr. N A Purandare Teaching Program**

Venue	BYL Nair Hospital and TNMC, MUMBAI via Onference Webinar		
Date and time	26 <sup>th</sup> July, 2020: 10am – 2pm		
Conveners	Dr. Shailesh Kore and Dr. Mansi Medhekar		
Session 1	Case presentation on “Pregnancy in previous LSCS”	Dr. Neha Kulkarni	Examiners: Dr.Ganesh Shinde, Dr. Ashok Anand, Dr. Alka Gupta, Dr.Geetha Balsarkar
Session 2	Chairpersons: Dr. SheetalGujral Dr. Ankita Pandey	Dr PunitBhojani- ‘Prevention and treatment of SSI’ Dr Parikshit Tank’s elaborate talk on ‘Surgical management of PPH’.	
Inauguration	Welcome address by Dr Ganesh Shinde- HOD OBGY Dept – Nair Hospital, Dr Rishma Dhillon Pai, President MOGS and Dr Anahita Chawhan, Secretary MOGS. Dean Nair Hospital, Dr. Mohan Joshi also expressed his views on how such teaching programs benefit students.		
Session 3	Case presentation on ‘Prolapse in young women’	Dr.Zayan Sayed	Examiners: Dr. Niranjan Mayadeo, Dr. ArunNayak, Dr. Shailesh Kore, Dr.Pundalik Sonawane
Session 4	Chairpersons: Dr. VijayaBabare Dr. Animesh Gandhi	Dr. Mansi Medhekar- ‘POP Q Classification’ Dr.Vanita Raut - ‘Prevention and Treatment of Post Hysterectomy Vault Prolapse’.	
Session 5	A short 10 questions quiz was conducted by Dr.Shailesh kore		
Total Registrations	485		

Vote of Thanks by Dr. Shailesh Kore.

MOC - Dr Jiteeka Thakkar and Dr Medha Tankhiwale

Program coordinators - Dr. Sujata Dalvi and Dr. Ameya Purandare.



## 6) Report of Youngistan Conference 2020

Youngistan conference was one of its kind which was conceptualised and executed by the youth council members of MOGS with the Yuva leads and Dr. Rohan Palshetkar as the conveners. Since its inception in 2011 till date MOGS youth council has been nurtured and the mentors have extended their support to groom their youth council members. Dr. Rishma Pai gave an opportunity to showcase their talent on this platform.

This MOGS webinar was organised on 19th July 2020 from 10am-2.30 pm. It was in association with FOGSI committees- Young Talent Promotion committee, Clinical Research committee & Public Awareness committee. Slogan competition with a theme of- Save the Girl Child and E poster creative competition with a theme of -Population stabilisation was announced along with the conference. Total entries received for Slogan and E poster(creative) competition were 13 and 17 respectively.

Masters of the ceremony were -Dr. Shreedevi Tanksale and Dr. Tejal Poddar. The program started with a panel on adolescent health and its burning issues. This panel was moderated by Dr. Jiteeka Thakkar and Dr. Aditi Tandon with 9 youth council members as panelists. The session expert Dr. Kalyan Barmade concluded the panel incorporating his expert opinion for the same.

Thereafter, inauguration started with presidential address to the delegates. The guests of honour for this conference were young and talented Dr. Siddhant Bhargava and Anvisha Pai. Dr. Siddhant Bhargava is a nutritional scientist at Food Darzee. Anvisha Pai is a founder and CTO at Dover a tech start up based in Silicon valley, USA. The MOGS app version 2 was launched during the inauguration ceremony by Dr. Rishma Pai after Dr. Sarita Bhalerao's introductory speech about the app. Dr. Ritu Hinduja felicitated the youth council mentors.

Inauguration was followed by FIT IS IT video by Dr. Sargam Soni. 'Just a min' video sessions were conducted on topics related to Covid 19 pandemic by Dr. Medha Tankhiwale, Dr. Zubin Sheriar, Dr. Pranay Desai and Dr. Shruti Thar. Tips & tricks of photography was done by Sushil Shinde with the session expert being Dr. Ameya Purandare. Mogs Masti questions were asked in between the sessions. The program included a brand new topic-Digitisation, a new word of mouth in a different format of talk over the coffee with Dr. Niranjana Shanmugham, Dr. Ritu Hinduja and Dr. Bhumika Kotecha Mundhe.

The next session was Ashtra Shastra of ART and Endoscopy Units- How & Why? This was conducted by Dr. Shrutika Thakkar and Dr. Riddhi Desai with 11 youth council members as panellists. Dr. Meena Samant, the session expert expressed her opinion on establishing the ART and Endoscopy units.

The last panel discussion was a round table meet on 3P's - Practice, Pregnancy & Postpartum which was moderated by Dr. Bhavini Shah Balakrishnan and Dr. Shreya Prabhoo. In this session, 9 panelists shared their experience on work life balance, breast feeding, difficult antepartum and postpartum phase and last but not the least fighting this pandemic too. The session expert Dr. Neeharika Malhotra shared her views on the same topic.

The program ended with the valedictory session, where the prize winners were declared for the Slogan competition, E poster (creative) competition and Mogs Masti questions.

Total registrations -1317.

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

Rishma Pai

00:29:21 | 18 Views

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

**ANVISHA PAI**  
FOUNDER, DOVER

Founder, product thinker and engineer with a love for building amazing products that make work easier.

00:29:21 | 18 Views

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

Anahita Chauhan

00:29:21 | 18 Views

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

Dr. Siddhant Bhargava

00:29:21 | 18 Views

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

Dr. Rajendra Sankpal

00:29:21 | 18 Views

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

"Mentoring is a brain to pick, an ear to listen, and a push in the right direction." — John Crosby

00:29:21 | 18 Views

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

POCSO ACT

**YOUNGISTAN CONFERENCE**  
19th July 2020, 10 am onwards

Panel discussion  
**Adolescent health**  
Burning issues.

00:29:21 | 18 Views

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

Shrutika thakur

THE ASTRA SHASTRA OF ART & ENDOSCOPY UNITS

Moderators: Dr. Shrutika Thakur, Dr. Rishma Pai  
Session Expert: Dr. Manish Samant

00:30:41 | 8 views

MUMBAI OBSTETRIC & GYNAECOLOGICAL SOCIETY

**YOUNGISTAN CAFE**

DR. BHUMIKA KOTCHA MUNDHE  
DGO, DNB, MNAAMS, Trained in advanced Gynaecological Endoscopy, Singapore

DR. NIRANJAN  
managing director of emmess women care centre, Kanchipuram

DR. RITU HINDUJA  
Senior Consultant Nova IVF Mumbai, Another, Member of Managing Committee Indian Society of Assisted Reproduction

00:33:51 | 11 Views

YOUNGISTAN CONFERENCE

By The Young, For The Young Heart

Online Event Managed by Conference



## Youngistan Slogan Poster Competition

In the Youngistan conference, an innovative Slogan and creative E-poster competition was organised. The themes for the competition were as follows:

Theme for Slogan - **SAVE THE GIRL CHILD**

### THE WINNERS ARE - SLOGAN

**FIRST PRIZE- DR. ALKA BAPAT**

**SECOND PRIZE- DR. NIDHI SHAH**

*Mother or Father, neither is conceivable Without  
'Her'  
Save Her to take the Generations further.*



### THE WINNERS ARE - EPOSTER

Theme for E poster (creative) – **POPULATION STABILISATION**

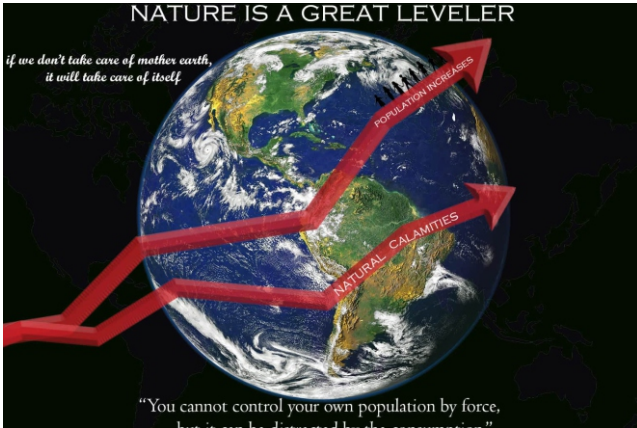
**FIRST PRIZE- DR. TEJAL PODDAR**

**SECOND PRIZE- DR. SHREEDEVI TANKSALE**



We received 17 entries for the e posters and 13 entries for the slogan competition.





**Dr. Shurti Thar**

### POPULATION STABILISATION "REDUCING THE TOTAL FERTILITY RATE"

We are celebrating the Population Stabilisation week from 5th Feb 2014 to 13th Feb 2014 with objectives:

- Family planning programmes.
- To spread awareness among people about family planning programmes.
- To give impetus to family planning services in the country.

**Achieving population stabilisation:**

- Increase the amount of money that they give to public health and family planning.
- Increase the average level of education, especially of women.
- Increase the employment opportunity for women.
- Decrease consumption by developed nations.

**If population stabilisation, not in control:**

"The earth cannot easily accommodate overpopulation, or else there is unemployment. Every individual will not be able to get enough work for livelihood. Resultant situation is associated with low living standards and poverty. Poor health due to improper food and nutrition for such large population."

**Methods for controlling Population Explosion**

The most common method for controlling population is the use of contraceptives. Contraception should be carefully, wisely, available, and with least side effects.

- Encourage small families.
- Periodic abstinence in this mode, the couple avoid coitus from day 30 to 37 of the menstrual cycle. These are the days when ovulation is expected.

**Withdrawal or coitus interruptus** is another method for control where male partner draws his external genitalia or penis just before ejaculation.

**Lactational amenorrhoea** is absence of menstruation during lactation just after parturition. The chances of conception are minimum during lactation.

**Other barrier method** is use of condom. The use of condoms also helps in preventing sexually transmitted diseases such as AIDS (acquired immunodeficiency syndrome).

**Pills** are used as oral contraceptives.

**Diaphragms, cervical caps** They are inserted into the female reproductive tract to cover the cervix during conception. They prevent conception by blocking the entry of sperm into the female body. For example, CuI, Cu7, tapes loop, etc.

**Surgical methods** are also being used to control birth.

**Example sterilization methods:**  
Tubectomy in females, Vasectomy in males.

**Medical termination of pregnancy (MTP)** is better known as induced abortion in the country. Termination of pregnancy (MTP) was legalized in 1971. It is performed in the following cases:

- If women desire for MTP.
- If a woman has some chronic problems.
- If woman is obese in early period of gestation.

**Amniocentesis** is a method used to diagnose any chromosomal abnormality and infection in the fetus. There are various chromosomal abnormalities that can be diagnosed using amniocentesis such as: Down syndrome, Phelan's syndrome, neural tube defects, etc. Using this method, a couple can also identify the sex of the unborn child.

**App Distribution of Religion Groups - 2010**

Religion	2010	2011	2012	2013	2014
Hindu	74.2%	74.2%	74.2%	74.2%	74.2%
Muslim	13.4%	13.4%	13.4%	13.4%	13.4%
Christian	2.3%	2.3%	2.3%	2.3%	2.3%
Buddhist	0.7%	0.7%	0.7%	0.7%	0.7%
Jain	0.4%	0.4%	0.4%	0.4%	0.4%
Sikh	0.7%	0.7%	0.7%	0.7%	0.7%
Others	8.3%	8.3%	8.3%	8.3%	8.3%

**Dr. Pooja Mishra**

### POPULATION STABILIZATION "Easier said than Done"

Country's population stabilization occurs when deaths plus immigration equals deaths plus emigration. Thus, there is often a gap of 10-15 years between achieving replacement level fertility (i.e. FR of 2.1 (two children per couple) and population stabilization. For per National Population Policy, India has set target the goal of achieving the target goal of population stabilization by 2050.

**Factors influencing population growth:**

- Crude birth rate
- Total fertility rate
- Unmet need for family planning
- Contraceptive use
- Sexing between sexes, Age at marriage and First Child Birth
- Healthcare facilities, Age at marriage and First Child Birth
- Healthcare facilities, Age at marriage and First Child Birth
- Healthcare facilities, Age at marriage and First Child Birth

**Population Stabilization and Birth Control**

(a) The most increase in human population size over a relatively short period is called **Human Population Explosion**.

(b) Population growth rate depends on factors like fertility, natality, mortality, migration, etc.

(c) Improved health facilities and better living conditions are the cause behind population explosion.

(d) Out of billion world population, 1.3 billion population is of India.

(e) High decline in death rate, increase in birth rate (natality) and infant mortality rate (IMR) are major cause of population growth.

(f) Growth rate of India population is around 1.2 percent.

(g) Most of the urban people are concentrated.

(h) Birth control method which selectively prevents fertilization are referred to as sterilization.

(i) Contraceptive methods are preventive methods and are of two types - Temporary and Permanent.

**Characteristics of an ideal contraceptive are:**

- Safe
- Easy to use
- Not harmful to health
- Not interfere with sexual life

**Methods of Family Planning:**

Type of Service	Type of Facility	Wage (contribution by beneficiaries in INR)	Income to Govt (INR)	Total (INR)
Tubectomy	Private	500/-	500/-	1000/-
Vasectomy	Private	1100/-	500/-	1600/-

**Jansankhya Shiksha Kosh (Population Stabilization Fund)**

**Dr. Pooja Koli, JUNIOR RESIDENT, DR. SEEMA WANI, ADDL. PROF. AND HOD, INSTITUTE, HTMTC & DR. B. N. COOPER HOSPITAL, MUMBAI**

**Dr. Pooja Koli**

### IT'S EASY TO ADD DIFFICULT TO MAINTAIN

Either the species learn to control its own population or something like famine, disease etc. will take care of the issue...

**Resources Extinct - Human Extinct**

**GET!**

Avoid the contraception myth, else Future of humans is myth.

**AWARENESS NEEDED!!!!**

**The Effects of a Vasectomy:**

Safe and effective  
No side effects  
No pain  
No interference with sexual life

**PROMOTE MALE STERILIZATION**

Hum Do... Humhare Do...

**Family planning cum welfare is needed by the people, for the people, from the people.**

**Dr. Shreya Chinchoriya**

**Dr. Shreya Chinchoriya**

### Have you ever observed the Tower of Temples, Churches, Mosques, Pagodas or other places of Worship? Their Peculiar Shape that provides Stability to the structure, & all of them bear a Sign of Victory on top! Does it tell you something??

That's the **Exact STABLE** shape which we need to bring to our **Population curve**, which will give us the **Ultimate Victory**, in terms of -

- Better planning of Pregnancy and Births
- Lesser MMR & PNMR and STIs
- Completion of Full Education of girls
- More Participation of Women in Labour Force
- Increase in Nation's Productivity

**Reduction in Cost of Pregnancy and HIV related care of Women & Newborn by \$1.47**

**Stable Population = Successful Nation**

**APPROPRIATE BIRTH CONTROL FOR ALL**

**Dr. Navin Srinivasan**

**Dr. Navin Srinivasan**

### POPULATION STABILISATION

**WHY?**

SHORTAGE OF FOOD & WATER. CONSUMPTION OF NATURAL RESOURCES. ENVIRONMENTAL DEGRADATION.

**STOP VIOLENCE AGAINST WOMEN. GIRL & BOY EQUITY. FAMILY RESPONSIBILITY MUST BE SHARED. RIGHT TO CONTROL THEIR OWN FERTILITY. HIGH QUALITY EDUCATION & HEALTH CARE.**

**INDIA POPULATION SIZE OF 1.37 BILLION, 2ND MOST POPULOUS COUNTRY IN THE WORLD.**

**INDIA ADDS UP TO 1,000,000 PEOPLE TO ITS POPULATION EVERY 20 DAYS.**

**AWARENESS, EDUCATION, AVAILABILITY, AFFORDABLE, ACCESSIBILITY, SKILLED SERVICE PROVIDER IS THE KEY TO SUCCESSFUL FAMILY PLANNING PROGRAMME.**

**UNFPA'S GOAL IS TO RAISE AWARENESS OF WOMEN & GIRLS NEEDS FOR SEXUAL & REPRODUCTIVE HEALTH DURING THE PANDEMIC.**

**WORLD POPULATION DAY - 11/7/2020**

**Dr. Kinjal Shah**

**Dr. Kinjal Shah**

### POPULATION STABILISATION- OVERBURDENED EARTH CRIES FOR HELP!!

**FACTORS INFLUENCING OVERPOPULATION:**

- The Decline in Death Rate
- Better Medical Facilities
- More hands to overcome poverty
- Child Labor
- Immigration
- Lack of Family Planning
- Lack of education
- Poor Contraceptive Use
- Technological Advancement in Fertility Treatment
- Agricultural Advancement

**REAL EFFECTS OF OVER POPULATION:**

- Depletion of Natural Resources
- Degradation of Environment
- Conflicts and Wars
- Pandemics and Epidemics
- Malnutrition, Starvation and Famine
- Water Shortage
- Lower Life Expectancy
- Increased Intensive Farming
- Faster Climate Change

**INCREDIBLE SOLUTION FOR OVERPOPULATION:**

- Increase in Literacy rate
- Better Sex Education
- Change in policy
- Involving Social Organizations
- Providing more job facilities
- Access to Contraceptives
- Proper Implementation of Community Health Programmes

**WHAT CAN BE DONE?**

- Sterilisation camps for women in remote villages.
- Incentives for surgery condemned as coercion by legal experts
- One Child Policy
- Education to women
- Following Anti-Natalist policy

**Single child = stable family**

**Dr. Manitha Madar, Jn 2, DR. Reena J Wani HOU (OBGY), HTMTC & DR. RN Cooper hospital**

**Dr. Manitha Madar**

### It Is Easy To Add, But Difficult To Maintain

**जोड़ी जिन्मेदार जो प्लान करे परिवार**

**Birth control is the only moral choice...SAVE THE PLANET...**

**Dr. Rana Choudhary**

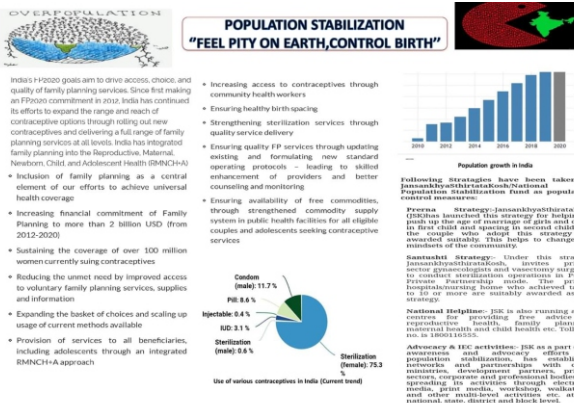
**Dr. Rana Choudhary**



## Only Child, Only Happiness



Dr. Mayuri More



### POPULATION STABILIZATION "FEEL PITY ON EARTH, CONTROL BIRTH"

**OVERPOPULATION**

India's P2020 goal: aim to drive access, choice and quality of family planning services. Since first making an FP2020 commitment in 2012, India has continued its efforts to expand the range and reach of contraceptive options through rolling out new contraceptives and delivering a full range of family planning services at all levels. India has integrated family planning into the Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH-A) element of our efforts to achieve universal health coverage.

- Increasing financial commitment of Family Planning to more than 2 billion USD from 2012-2020.
- Sustaining the coverage of over 100 million women currently using contraceptives.
- Reducing the unmet need by improved access to voluntary family planning services, supplies and information.
- Expanding the basket of choices and scaling up usage of current methods available.
- Provision of services to all beneficiaries, including adolescents through an integrated RMNCH-A approach.

**POPULATION STABILIZATION**

- Increasing access to contraceptives through community health workers.
- Ensuring healthy birth spacing.
- Strengthening sterilization services through quality service delivery.
- Ensuring quality FP services through updating existing and formulating new standard operating protocols - leading to skilled endorsement of providers and better counselling and monitoring.
- Ensuring availability of free commodities, through strengthened commodity supply systems in public health facilities for all eligible couples and adolescents seeking contraceptive services.

**Population growth in India**

Following strategies have been taken by Government of India to control population growth:

**Prerna Strategy:** (Jointly with UNFPA) through freebies incentives. This strategy for helping to curb the rate of marriage of girls and delay the couple's first child and also help in the long run to control the population. This helps to change the mindsets of the community.

**Prerna Strategy:** (Jointly with UNFPA) through freebies incentives. This strategy for helping to curb the rate of marriage of girls and delay the couple's first child and also help in the long run to control the population. This helps to change the mindsets of the community.

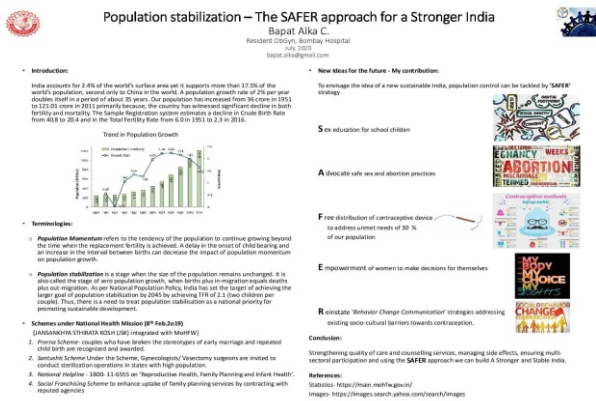
**National Helpline:** JSK is also running a toll free helpline for providing free advice on reproductive health, family planning and maternal health and child health care. Toll free: 1800-11-6355.

**Advocacy & IEC activities:** JSK as part of its awareness and advocacy efforts on population stabilisation, has established service clubs and partnerships with other organisations, inter-departmental quarters, for awareness, development and promotion for spreading the activities through electronic media, group media, workshops, walkabouts, road shows, mobile-based activities, etc. as the national shows, street and block level.

**Use of various contraceptives in India (Current trend)**

Condom	11.7%
IUD	3.1%
Injectable	0.4%
Sterilization (male)	0.8%
Sterilization (female)	75.3%

Dr. Shreya Prasad



### Population stabilization - The SAFER approach for a Stronger India

Bapat Alka C.  
Resident Doctor, Bombay Hospital  
July 2020  
bapat@bghh.com

- Introduction:** India accounts for 2.4% of the world's surface area but supports more than 17.5% of the world's population, second only to China in the world. A population growth rate of 2% per year doubles the size of a population in 35 years. Our population has increased from 36 crore in 1951 to 121.25 crore in 2011. Particularly because the country has witnessed a sharp decline in both fertility and mortality. The Sample Registration System estimates a decline in Crude Birth Rate from 48.8 to 20.4 and in the Infant Mortality Rate from 6 to 20.5 in 2018.
- Trend in Population Growth:** [Line graph showing population growth trends]
- Terminology:**
  - Population Momentum:** refers to the tendency of the population to continue growing beyond the time when the replacement fertility is achieved. A delay in the onset of child bearing and an increase in the interval between births can decrease the impact of population momentum on population growth.
  - Population stabilisation:** is a stage when the size of the population remains unchanged. It is also the stage of zero population growth, when births plus immigration equals deaths plus emigration. To get natural population, India has to get to the stage of achieving the larger goal of population stabilisation by 2045 by achieving TFR of 2.1 (two children per couple). Thus, there is a need to keep population stabilisation as a national priority for promoting sustainable development.
- Schemes under National Health Mission (NHM) Feb 20-20** (Jansankhya Shiksha Kosh) (Integrated with MGNREGS)
  - Prerna Scheme: couples who have broken the stereotypes of early marriage and repeated child birth are recognized and awarded.
  - Santushti Scheme: Under the Scheme, Gynecologists/Vasectomy surgeons are invited to conduct sterilization operations in states with high population.
  - National Helpline - 1800-11-6355 on 'Reproductive Health, Family Planning and Infant Health'.
  - Social Franchising Scheme to enhance uptake of family planning services by contracting with reputed agencies.
- New ideas for the future - My contribution:** To envisage the idea of a new sustainable India, population control can be tackled by 'SAFER' strategy.
  - S**ex education for school children.
  - A**void safe sex and abortion provision.
  - F**ree distribution of contraceptive device to address unmet needs of 30% of our population.
  - E**mpowerment of women to make decisions for themselves.
  - R**estitute 'Behavior Change Communication' strategies addressing existing socio-cultural barriers towards contraception.
- Conclusion:** Strengthening quality of care and counselling services, managing safe risks, ensuring multi-sectoral participation and using the SAFER approach can curb a Stronger and Sober India.
- References:** Statistics: <https://mha.nmim.gov.in/> Images: <https://images.search.yahoo.com/search/images>

Dr. Alka Bapat



### So What should We Do?

• Import a few people here and there..  
• EASIEST OPTION ;)

## पापुलेशन कंट्रोल - क्या करें!

**NOT EFFECTIVE**

Give free televisions to people in densely populated states like Uttar Pradesh and Rajasthan, so they have another way to entertain themselves at night.  
**NOT SURE OF THIS ONE !!**

Look for Indians who want to sell one of their kidneys for organ transplants and convince them **IMMEDIATELY NOT POSSIBLE**

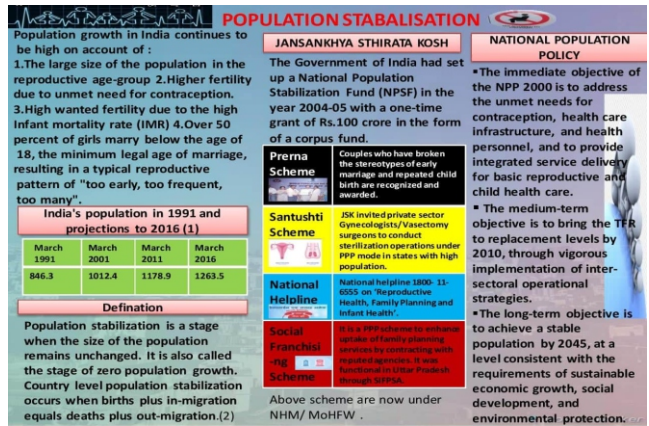
Buy costly rare medicines: "If you do it once a day, you'll have more time to drink beer."  
**MAYBE POSSIBLE-CREATING AN**

"When there is no electricity, there is nothing else to do but produce babies. If there is electricity in every village, then people will watch TV till late at night and won't fall asleep. They won't get a chance to produce children."

If the population keeps expanding, the government may have to follow these drastic steps:  
• Offer people in foreign countries a 10,000-rupee bonus if they want to adopt an Indian child and a 100,000-rupee bonus if they adopt an Indian adult.  
• Train more Indians in computer science and make them on the next boat to... by can clearly utter at least 50 words in English to ensure that...

Dr. Neharika Malhotra  
dr.neharika@gmail.com

Dr. Neharika Malhotra



### POPULATION STABILISATION

Population growth in India continues to be high on account of:

1. The large size of the population in the reproductive age-group
2. Higher fertility due to unmet need for contraception.
3. High wanted fertility due to the high infant mortality rate (IMR) 4. Over 50 percent of girls marry below the age of 18, the minimum legal age of marriage, resulting in a typical reproductive pattern of 'too early, too frequent, too many'

Year	Population
March 1991	846.3
March 2001	1012.4
March 2011	1178.9
March 2016	1263.5

**Definition:** Population stabilization is a stage when the size of the population remains unchanged. It is also called the stage of zero population growth. Country level population stabilization occurs when births plus in-migration equals deaths plus out-migration. (2)

**JANSANKHYA SHIKHARA KOSH**  
The Government of India had set up a National Population Stabilization Fund (NPSF) in the year 2004-05 with a one-time grant of Rs.100 crore in the form of a corpus fund.

**NATIONAL POPULATION POLICY**  
The immediate objective of the NPP 2000 is to address the unmet needs for contraception, health care infrastructure, and health personnel, and to provide integrated service delivery for basic reproductive and child health care.  
The medium-term objective is to bring the TFR to replacement levels by 2010, through vigorous implementation of inter-sectoral operational strategies.  
The long-term objective is to achieve a stable population by 2045, at a level consistent with the requirements of sustainable economic growth, social development, and environmental protection.

**Prerna Scheme:** Couples who have broken the stereotypes of early marriage and repeated child birth are recognized and awarded.

**Santushti Scheme:** JSK invited private sector Gynecologists/Vasectomy surgeons to conduct sterilization operations under PPP mode in states with high population.

**National Helpline:** 1800-11-6355 on 'Reproductive Health, Family Planning and Infant Health'.

**Social Franchising Scheme:** Uptake of family planning services by contracting with reputed agencies. It was launched in Uttar Pradesh through SPPSA.

Above scheme are now under NHM/ MoHFW.

Dr. Ashwini Patle



### E poster - Population Stabilisation

Dr. Pradnya Chagede  
Assistant Professor, Department of Obstetrics and Gynecology, LTMMC, Sion, Mumbai 400022.

World population - 7.8 billion.  
India's population - 1.36 billion.  
Population growth is a bomb which will explode if not controlled.

Resources are limited - problem of humanity.

World population day seeks to raise awareness of global population issues since 1989.

Theme of World Population Day 2020 is to raise awareness about reproductive health needs and vulnerability of women during COVID-19 pandemic.

History proves that use of birth control population growth has failed.

Collective measures adopted by ministry of health are:

- 1) Interventions under family planning programme.
- 2) Prerna strategy - JSK (Jansankhya Shiksha Kosh) push up of marriage, delay first child, spacing, couple who adopt are rewarded.
- 3) Santushti strategy: invite private sector doctors to conduct sterilization operations in public-private partnership.
- 4) National helpline.
- 5) Advocacy and integrated activities.
- 6) Gender equality.
- 7) Educate girl child.

Dr. Pradnya Chagede



### Population Stabilization

"Strong coffee makes a strong doctor, and a strong 'cafeteria approach' makes stronger impact."

#### Solutions

- Empower women
- Family planning
- Government incentives

One is good, two is enough

Dr. Kathan Acharya



**Breastfeeding Week Competition 2020**

**FOGSI** invited entries for Slogan, Video and Poster competition on Breast Feeding- Elixir of Life. **MOGS** members submitted their entries to **MOGS** office. The winners were selected by an esteemed panel of judges. These entries represented Mumbai society in the all India event. The winners are as follows:



**1. Dr. Rashi Korla**

**"BREASTMILK"**  
Nothing can be better  
Be Atmanirbhar

Slogan : **Dr. Tejal Poddar**

**POSTERS**



**2. Dr. Shreedevi Tanksale**



**CROSS CRADLE HOLD**

**Video : Dr. Bhavini Shah**

<https://www.youtube.com/watch?v=uX4LFdhvo6E>

**FORTHCOMING EVENTS - C2C**

The **MOGS Virtual Conference** : Conflict to Clarity will be held online on **Sunday** the **30th** of **August 2020** from **16:00 hrs to 20:30 hrs**.

This conference aims to analyse and validate some of the important controversial issues that we, as gynaecologists face in present day practice. This conference will aim to apprise practising doctors of the latest and best in the discussed topics in a comprehensive yet practical manner.

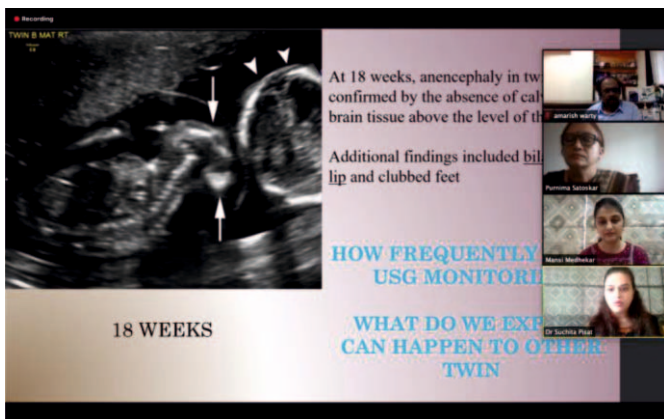


**7) MOGS Outreach Webinar**

Date and time	Sunday, Aug 09, 2020 10:25am – 12:25pm
Associations	FOGSI Medical Disorder Committee
Conveners	Dr. Purnima Satoskar, Dr. Punit Bhojani, Dr. Nagendra Sardeshpande, Dr. Mansi Medhekar
Masters of Ceremony	Dr. Riddhi Doshi, Dr. Pranay Desai
Educational grants from	Senora – A Division of Sun Pharma
Session 1	Chairpersons: Dr. Swapnali Malkar, Dr. Anagha Chhatrapati
Uterine Fibroids - Emerging Medical Treatment Options	Dr. Riddhi Doshi
Cutting Edge Calcium: Dicalcium Malate	Dr. Nagendra Sardeshpande
Session 2	Chairpersons: Dr. Amarish Warty, Dr. Niraj Jain
Breaking Bad News	Dr. Bipin Pandit
Progesterone in Preterm Labour	Dr. Ashok Kumar
Session 3: Panel Discussion on Multiple Pregnancies : Interesting case scenarios	Moderators-Dr. Punit Bhojani, Dr. Mansi Medhekar Panelists- Dr. Purnima Satoskar, Dr. Komal Chavan, Dr. Madhuri Mehendale, Dr. Pooja Vazirani, Dr. Rakhee Sahu, Dr. Suchita Pisat.
Total attendance	547

MOGS Masti Conducted by Dr. Namrita Sheregar.

Winners : Dr. Dhaval Belvi, Dr. Unnati Shah, Dr. Smriti Saxena





**8) MOGS 3rd Dr. N A Purandare Teaching Program**

Venue	Bombay MUMBAI via Onference Webinar		
Date and time	13 <sup>th</sup> August, 2020: 4-8 pm		
Conveners	Dr. Sujata Dalvi and Dr. Ameya Purandare		
Session 1	Case presentation on Heart disease in pregnancy	Dr.Sakina Radiowala	Examiners : Dr. Suvarna Khadilkar, Dr. Nagesh Waghmare, Dr. Shashi Goyal, Dr. Sujata Dalvi
Session 2 Capsules	Chairpersons: Dr. Satish Tibrewala, Dr. Kunjal Bhatija, Dr. Shilpa Ambekar	Dr. Satyavan Sharma- Management of cardiac disorders in pregnancy Dr. Satish Khadilkar- Being a PG what is it really about?	
Inauguration	Welcome address by Dr. Suvarna Khadilkar. Dr R Patil and Dr Satish Khadilkar also encouraged the students. Presidential address by Dr Rishma Pai		
Session 3 Capsule	Chairpersons: Dr. Neelima Mantri, Dr. Varsha Pai	Dr. Abhay Bhave Peri operative coagulation and bleeding management Dr. Piya Thakkar Drug therapy in GDM	
Session 4	Case presentation on Abnormal Uterine bleeding	Dr Alka Bapat. Examiners -: Dr. Prema Kania Dr Anahita Chauhan, Dr Pratima Chipalkatty	
Total Registrations	230		

Vote of Thanks by Dr Tejaswi Kamble

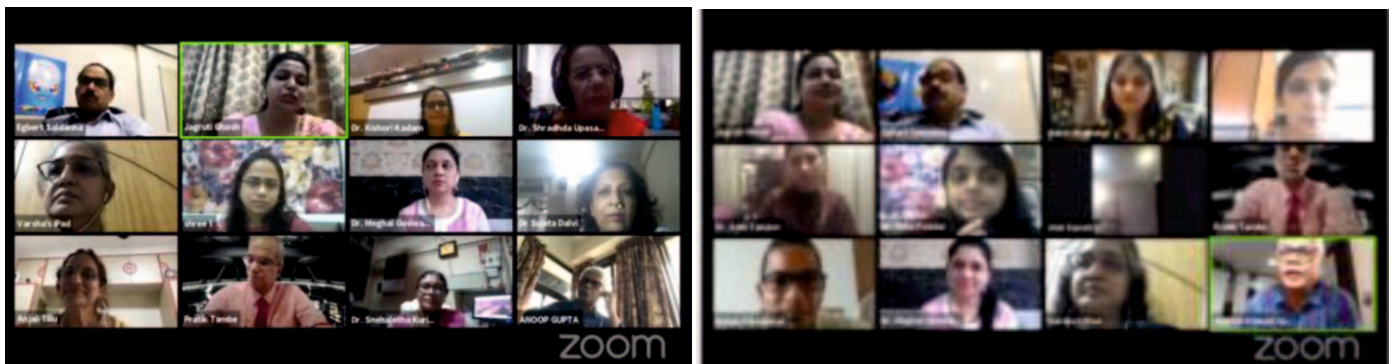
Dr. MOC Dr Kinjal Shah, Dr. Preeti Deshpande, Dr Pradnya Supe, Dr Siddhesh Iyer  
Program coordinators - Dr. Suvarna Khadilkar and Dr Kunjal Bhatija



**9) MOGS Outreach Webinar**

Date and time	Sunday, Aug 16, 2020 10 am to 1 pm
Conveners	Dr Atul Ganatra, Dr Pratik Tambe, Dr. Ashwin Kakkar
Masters of Ceremony	Dr Jagruti Ghosh
Educational grants from	Inca Lifesciences- A Division of Sun Pharma
	TRIBUTE TO Dr. PARAG PATIL by Dr Niranjan Chavan
Session 1	Chairpersons : Dr. Anjali Tillu, Dr. Snehalettha Kuris, Dr. Sujata Dalvi
Hyperprolactinemia	Dr. Shreedevi Tanksale
Pre ART Hysteroscopy	Dr. Riddhi Desai
Session 2	Chairpersons: Dr. Kishori Kadam, Dr Samir Pradhan
Covid -19 - Intensivist's prespective	Dr. Anita Matthew
FOGSI- GCPR on Covid 19	Dr. Atul Ganatra
Session 3	Chairpersons: Dr Shradha Upasani, Dr Jayant Maheshwari, Dr Rajendra Nagarkatti
OAT Whats New?	Dr Kedar Ganla
Obstetric in Low resource setting	Dr Ashwin Kakkar
Session 3: Panel Discussion on Interesting cases in Infertility	Moderators - Dr. Pratik Tambe, Dr. Priya Vora Panelists - Dr.VarshaPhadke, Dr Egbert Saldanha, Dr Anoop Gupta, Dr. Meghal Goswsami, Dr. Rohan Palshetkar, Dr Aditi Tandon, Dr. Tejal Poddar, Dr Jagruti Ghosh
Total attendance	297

MOGS Masti conducted by - Dr. Mansi Medhekar  
Winners - Dr Rejeev Srivastava and Dr Samir Pradhan





## Unexplained Recurrent Pregnancy loss

### Dr. Kedar Ganla

MD, DNB, FCPS, DGO, DFP, FICOG

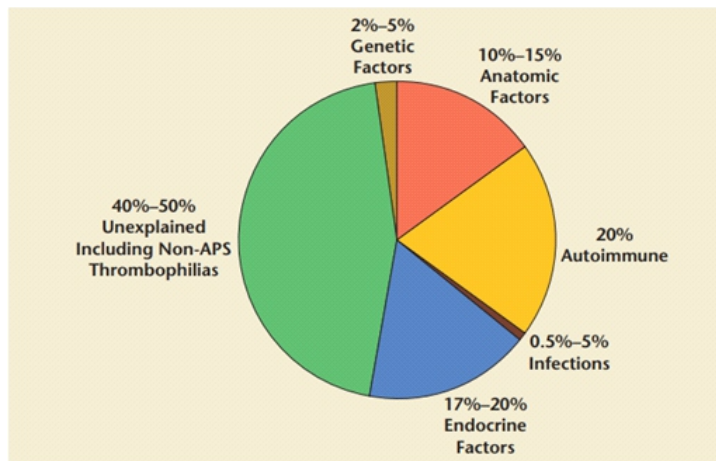
Consultant fertility physician & Director- Ankoor Fertility Clinic  
Jt Clinical Secretary, MOGS



#### Introduction:

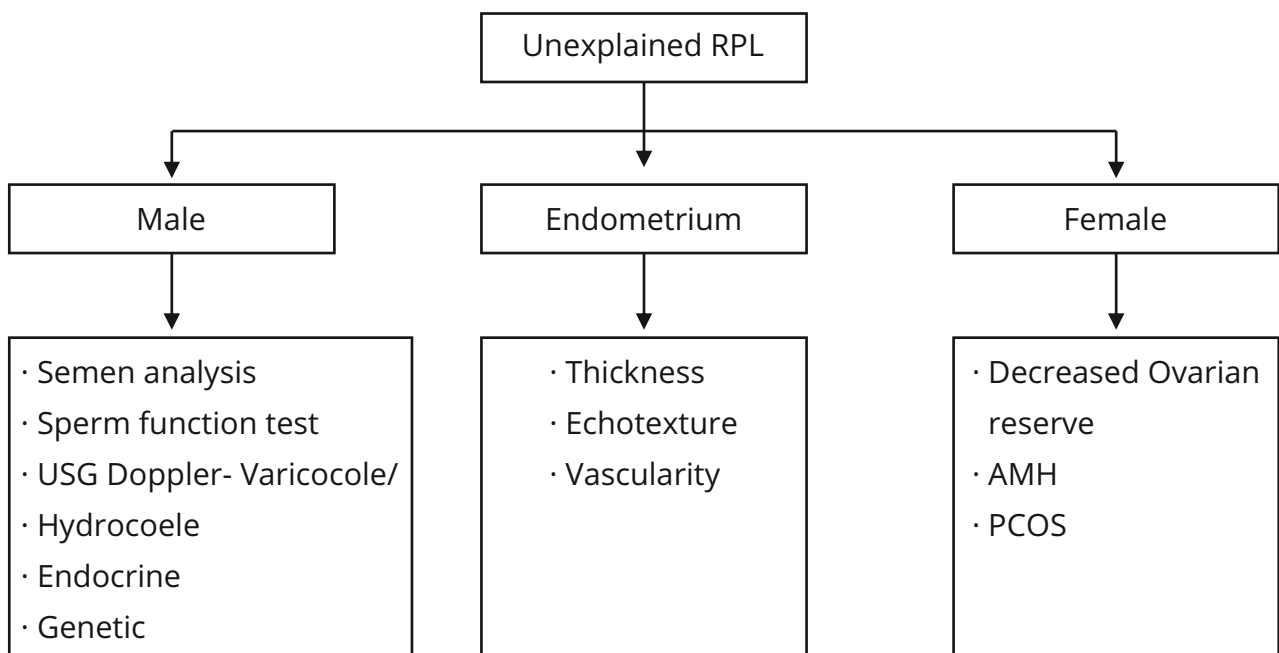
- Spontaneous pregnancy loss is a quite common and around 15% of all pregnancies may result in abortions.
- Generally defined as 3 consecutive pregnancy losses prior to 20 weeks from the last menstrual period.

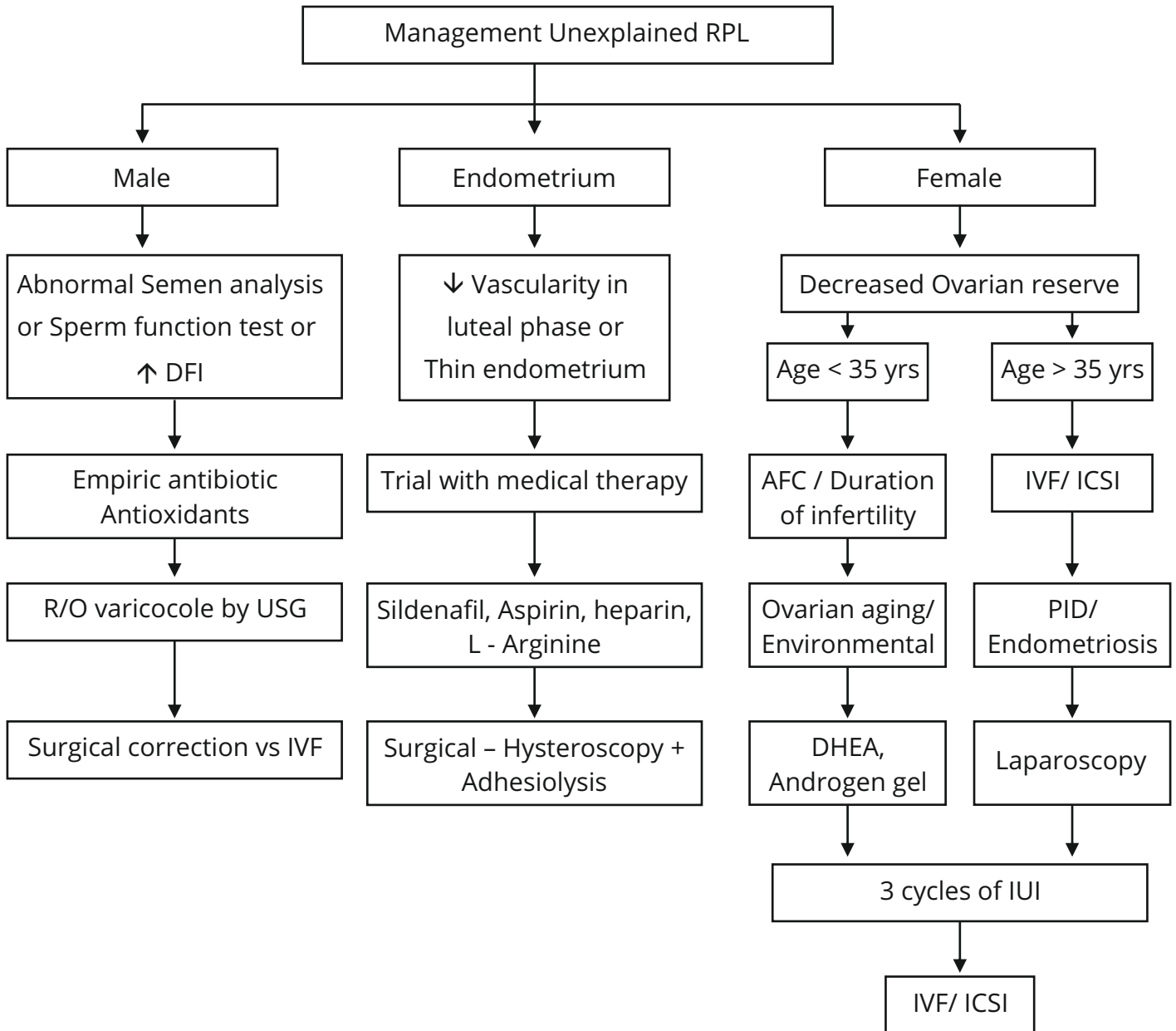
When the cause for these losses is not found on standard investigations, it is called Unexplained Recurrent Pregnancy loss.



**Fig 1: . Etiology of recurrent pregnancy loss. APS, antiphospholipid antibody syndrome.**

#### Investigations in RPL:





**Salient features:**

- Accepted etiologies for RPL include parental chromosomal abnormalities, untreated hypothyroidism, uncontrolled diabetes mellitus, certain uterine anatomic abnormalities, and the antiphospholipid antibody syndrome (APS). Other probable or possible etiologies include additional endocrine disorders, heritable and/or acquired thrombophilias, immunologic abnormalities, and environmental causes. After evaluation for these causes, around 30 -40% will remain unexplained.
- In cases of unexplained RPL, progesterone has been shown to be beneficial in decreasing the miscarriage rate.
- Low-dose aspirin may be considered.

**The most effective therapy for patients with unexplained RPL is often the most simple:  
Antenatal counseling and Psychological support.**

## **RPL - Autoimmune disorders and thrombophilia in pregnancy**

### **DR. PRITI VYAS MD, DGO,FCPS,MSC**

Managing Committee member and Youth Mentor MOGS  
National Coordinator FOGSI YOUTH MELA  
Consultant Laparoscopic surgeon & Fertility Specialist  
Expert in Women's intimacy issues  
Director Sangita maternity Surgical and Diagnostic Centre  
and One to One Guidance Centre



Pregnancy is a hypercoagulable state, and maternal thrombophilic defects would exaggerate the hemostatic response of a normal pregnancy causing arterial and venous thrombosis – systemic / placental resulting in complications such as RPL, growth restriction in fetus, preeclampsia, placental abruption, placental infarctions and still birth.

These defects can be hereditary or acquired. While Anti phospholipid syndrome comes under the acquired defect, a number of thrombophilia also have similar pathophysiology and treatment; and hence we will discuss them under one heading here.

### **Immunologic Factors**

Both autoimmune and alloimmune mechanisms have been implicated as a cause for recurrent pregnancy loss.

**Auto immune disorders** involve an immune response directed against a specific part of the host or self with formation of antibodies; such as SLE and APLS. The dysregulation of the immune system causes the circulating endogenous antibodies to react with the self-antigens and form immune complexes which get deposited in the tissues causing tissue damage and the disease.

### **Autoimmune Disorders – SLE:**

Systemic Lupus Erythematosus is a polyetiological, chronic, multisystem autoimmune disease which has been associated with RPL since long and is responsible for 20 % of the RPL as per various studies.

- Incidence of pregnancy loss is 6% in SLE patients as compared to 1-3 % in general population.
- Most of the miscarriages are in the second and third trimester
- Early miscarriages are not more common in women with SLE than in general population
- Active disease at conception, onset during pregnancy and renal disease; increase risk of pregnancy loss

### **Autoimmune Disorders -Antiphospholipid Syndrome:**

Antiphospholipid Syndrome is a systemic autoimmune condition characterized by recurrent vascular thrombosis with pregnancy comorbidities along with presence of antiphospholipid antibodies (APS).

PAPS- primary Antiphospholipid Syndrome where pregnancy loss is in fact one of the criteria for its diagnosis. Prevalence in general population is 2%, in women with RPL is low – 3-5 % but in the ones with SLE it is as high as 30%. It is a potentially treatable cause and hence should be evaluated.

33-75% of pregnancy losses related to APLS occur after 10 weeks' gestation

- Women with APS have a miscarriage rate of 90 % in subsequent pregnancies if untreated.



### **Autoimmune Disorders -Thyroid Autoimmune Disease:**

Maternal thyroid dysfunction is associated with RPL. Presence of ANA and Antithyroid antibodies- Thyroid Peroxidase antibodies and Thyroglobulin antibodies –more than triples the risk of miscarriages and preterm deliveries. Women with antithyroid antibodies have higher chance of becoming hypothyroid and may present with subclinical hypothyroidism, also would have chance of postpartum thyroiditis.

### **Alloimmune Disorders**

-involve abnormal maternal immune response to fetal or placental antigens. These may be through absence of the maternal blocking antibodies or presence of cytotoxic antibodies or disturbance of natural killer cell function and distribution.

### **Inherited Thrombophilia**

In some women the thrombogenic changes of pregnancy exaggerate an inherent tendency to thrombosis which results in reduced uteroplacental blood flow, thrombosis in the placental bed vessels and pregnancy loss or complications. It encompasses a group of disorders where there is imbalance between procoagulant and thrombolytic factors– imbalance between the clotting factors, the anticoagulant proteins and the fibrinolytic mechanism.

### **Pathophysiology**

Fetal Death is usually preceded by poor fetal growth, oligohydramnios, heart rate abnormalities, preeclampsia or eclampsia –all may be due to placental insufficiency and resultant hypoxemia.

- Increased thrombosis with Uteroplacental thrombosis / vasoconstriction / placental infarcts
- The APLA are directed to platelets causing aggregation and again thrombosis.
- Decreased fibrinolysis
- Abnormalities of early trophoblasts invasion – early and late pregnancy losses
- At present Cytokine dysregulation of immune system operating at the materno-fetal interface is the most likely pathophysiological mechanism involved in Alloimmune Disorders.

Inherited Thrombophilia- Basic cause is Imbalance in coagulation and fibrinolysis – imbalance between the clotting factors, the anticoagulant proteins and the fibrinolytic mechanism- results in increased thrombin generation and hypercoagulable state.

- Factor V Leiden and prothrombin gene mutation are the most common especially in the Caucasian population
- Deficiencies of Antithrombin III, protein C and protein S, and factor XII deficiency
- Association more with second trimester and later losses rather than early losses.

### **Diagnosis and screening**

#### **The International Consensus Definition for the Diagnosis of APLA:**

The characteristic features of APS are venous and arterial thrombosis, fetal losses and thrombocytopenia. It is an autoimmune disorder having specific clinical and lab criteria for diagnosis. At least one lab and one clinical criteria has to be present

**Clinical criteria:**

1. Vascular Thrombosis- Thromboembolic event (arterial, venous, small vessel)- confirmed by doppler/imaging/histopathology (without significant inflammation in vessel wall), with exception of superficial venous thrombosis.

2. Pregnancy morbidity-

- ❖ One or more losses after 10 th week of morphologically normal fetus
- ❖ One or more preterm delivery before 34 weeks due to pre-eclampsia/eclampsia/placental insufficiency
- ❖ 3 or more unexplained consecutive early marriage.

**Laboratory Criteria:**

1. Lupus Anticoagulant present 2 or more occasions 12 weeks apart

2. Anticardiolipin Antibodies-IgG or IgM in medium to high titers on 2 or more occasions 12 weeks apart

3. Anti B2 Glycoprotein 1 antibody of IgG or IgM in 99percentile titer on 2 or more occasion 12 weeks apart

In 2006 Newer marker, Antiphosphatidylserine-dependent antiprothrombin antibody has also been detected in these patients .

**Autoimmune Disorders - SLE**

**Diagnostic tests**

Screening	CBC – Anemia, leukopenia, mild thrombocytopenia
	ESR- raised
	Urine – proteins and sediments
	Creatinine and uric acid
	Antinuclear antibodies
Specific	Anti dsDNA antibody
	Complement C3, C4, CH50
	Anti RO/SSA and AntiLA/SSB antibodies
During pregnancy	Screening for APS- Antiphospholipid antibodies

**ANA and Antithyroid antibodies** are not clinically significant in Euthyroid women with RPL, but women with antithyroid antibodies have higher chance of becoming hypothyroid and may present with subclinical hypothyroidism, also would have chance of postpartum thyroiditis.

**Tests**

**ANA and Antithyroid antibodies- Thyroid Peroxidase antibodies and Thyroglobulin antibodies**

**For Inherited Thrombophilia** - Indications for screening and treatment are not yet established with respect to RPL.

- Reasonable to screen unexplained RPL -with suspicious loss after 8 wks. of gestation or after detection of embryonic heartbeat, or history of other pregnancy complications in previous pregnancy.

- Personal history of VTE with nonrecurrent risk factor
- First degree relative with a high-risk thrombophilia or VTE before age 50 in absence of risk factors
- Race must be also considered, the prevalence of some is high among European but very low among Asians, African and Native Americans.
- Tests for Thrombophilia

Thrombophilia	Test to be done
Factor V Leiden	Activated Protein C resistance followed by genetics
Prothrombin mutation	Free antigen levels
Protein S deficiency	Protein S antigen levels
Protein C deficiency	Chromogenic activity
Antithrombin deficiency	Heparin linked cofactor assay

The incidence of inherited thrombophilia especially Protein S and C deficiency is rare in the Caucasian population, however ethnic and racial diversity exists (TIPPS Study). In India and SE Asia, the incidence is much higher.

**Treatment:**

**Alloimmune disorders:**

The assumption of the abnormal immune response being the cause of RPL in these patients has led to the theory of two different immunotherapies - one is immunostimulatory (Paternal leukocyte stimulation) and the other immunosuppressive (IV Immunoglobulins). A Cochrane review of these randomized trials have concluded that these are not proven to improve the live birth rate as compared to placebo treatment.

**Treatment of SLE -**

In general, avoid pregnancy or delay till remission of 6 months.  
 If Moderate renal insufficiency, - increased risk of pregnancy loss  
 In severe renal insufficiency, - avoid pregnancy  
 Even successful pregnancies - increased risk of preeclampsia and preterm delivery  
 Stop using NSAIDs when trying for pregnancy  
 Crucial decision may be to continue the pregnancy or not to in cases of worsening hypertension or renal complications or pulmonary arterial hypertension.

- HCQ started preconceptionally and continued all through pregnancy
- Low dose aspirin - at 12 weeks onwards prevents onset of pre-eclampsia
- Corticosteroids- oral or IV- high dose initially and then maintenance therapy oral - co administered with immunosuppressants
- Immunosuppressants- Safe ones which can be used during pregnancy are Azathioprine, Cyclosporin, Tacrolimus and Rituximab



- Vigilant obstetric management with fetal surveillance

### **Treatment of APLS**

1. Antiplatelet agents – Low dose Aspirin- 75-150 mg /day - Benefit of low dose aspirin is less when given alone
2. Prophylactic anticoagulation with heparin unfractionated or LMWH - throughout pregnancy beginning at confirmation of pregnancy and till 6 weeks postpartum.

Live Birth rate with combined treatment of Aspirin and Heparin or LMWH (70-80%), is much better than aspirin alone or no treatment (20-40%) and is the preferred treatment.

However, the inherent risks that come with the disease – preterm labor, preeclampsia, eclampsia, oligohydramnios, IUGR, fetal demise all remain even with the treatment.

Both Heparin and LMWH have anti-coagulant properties and also have anti complementary effect which is protective.

Both do not cross the placenta and no fetal complications are reported.

Unfractionated heparin

- 5000-7500 IU BD- prophylaxis and 10000IU BD- therapeutic dose, dose can be reduced during labor
- Before elective surgery - stop 48 hrs. prior to surgery
- Main danger – osteoporosis- pregnancy and breastfeeding further.
- Heparin induced Thrombocytopenia – immune response not related to the dose of heparin injection; the platelet count - monitor frequently day 4 to day 14; if drops shift to LMWH.

### **LMWH**

Dose – 1mg/kg body weight/ day once pregnancy is confirmed. Enoxaparin 60 mg /day or Dalteparin 5000 Units /day till 36 weeks

Advantage over unfractionated heparin,

- lesser chances of osteopenia
- No thrombocytopenia.
- Longer half-life so once daily dosing
- Needs less monitoring.

### **3. Other therapies: Immunosuppressive therapies - corticosteroids and IVIG**

- Prednisolone may have efficacy – with APLS- risks of Diabetes, Hypertension preterm birth - outweigh the benefits.
- IV immunoglobulins have also been used, but efficacy has not been directly compared to the combined treatment with Aspirin and LMWH. 2005 A Cochrane review concluded that it did not improve the live birth rate ; but another metanalysis showed a significant increase in the live birth rate in women refractory to aspirin and LMWH. It is beneficial in secondary RPL but not Primary RPL.
- Warfarin – pregnancy category D – discontinue in the first trimester- risk of embryopathy, switch to aspirin and LMWH combination.

## **Practical difficulties or Issues with Heparin or LMWH**

### **Common Questions and issues**

- How often do I need to monitor the patients CBC and PT INR—Only once at start of therapy for LMWH. For unfractionated heparin monitor frequently day 4 - day 14
- Precautions while giving the injection –subcut only and not intradermal.
- Bruising – blackblue patches, at injection site and Ecchymosis – Postinj, give firm pressure on site for few minutes, apply ice and reassure.
- What if taken injection and goes in labor or have to do Emergency surgery-  
-Ideally gap of atleast 8hrs. between the surgery and last dose, so delay surgery if possible  
-blood reservation  
-Antidote for heparin is Inj protamine sulfate (one mg for neutralizing 80-100 iu of heparin if given 15 mins after the inj heparin. Lesser dose if more time has lapsed after the injection.)  
- a spinal or epidural anesthesia has to be avoided.
- Elective Surgery- 8 Hours gap after inj
- Restart - after 8 hours of the surgery or delivery.
- Risk of PPH or intraoperative bleeding –usually no such incidences
- How long to continue postpartum? – Minimum 6 weeks ,sometimes 12 weeks postpartum if H/O thrombosis in the past.
- Cost -even though the cost of UFH is lower than LMWH, the additional cost of hospitalization, coagulogram monitoring, laboratory monitoring of anticoagulant activity is needed to adjust the dose of heparin and monitor its effect in the hospital, the total cost of therapy associated with UFH is higher than with LMWH, and the compliance is better with LMWH.
- the risk of osteopenia and thrombocytopenia iswith unfractionated heparin
- Enoxaparin may interact with other medications- such as NSAIDs, Antiplatelet drugs and herbal supplements such as Gingoko biloba, fish oil, garlic, ginsengetc. which are blood thinners- patients have to warned against use of these without informing the doctor

### **Bibliography**

- Empson M, L. M. (2007). Prevention of recurrent miscarriage for women with APLA or lupus Anticoagulant. Cochrane database syst rev.
- Fausett MB, B. D. (2002). Autoimmune causes of RPL Infertility and Repro medicine . Clin of north America , 159-81.
- Hansda J, R. J. (2012). Study of thrombophilia in RPL. 62, 536.
- Heikal NM, j. T. (2015). Lab evaluation of Antiphospholipid Syndrome : a prelim prosp study of phophatidylserine/prothrombin antibodies. Clin expimmunol , 180(2 218-26).
- Hutton B, S. R. (2006). use of IV immunoglobulin for treatment of recurrent miscarriage. 114 (134-42).
- Kuhn A, B. G. (2015). The diagnosis and treatment of SLE. 112 (25 423-32).
- MA Fritz, L. S. (2011). Clinical Gyn Endocrino & Infertility. Delhi: Wolters Kluwer.
- Narinder paul, S. a. (2019). Antiphospholipid Syndrome. Delhi London Panama: The Health Sciences .
- Salvi V, S. R. (2013).
- Vora S, S. S. (2008). Thrombophilai and unexplained fetal loss in Indian patients . 21 116.

## Anatomical Factors in first trimester Recurrent Pregnancy Loss

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### EPIDEMIOLOGY OF RPL

RPL affects 0.4–1% of couples. The risk of losing the pregnancy is more in early gestations, mostly in the first trimester. There is 22–57% of risk of miscarriage with pregnancy less than 6 weeks.

From various studies the prevalence of RPL is found to be between 0.6% and 2.3%.

Twelve to sixteen percent of RPL cases are associated with anatomic abnormalities. These include congenital uterine anomalies (incomplete müllerian fusion or septum, uterine artery anomalies, DES exposure, and cervical insufficiency) and acquired anomalies (intrauterine adhesions and uterine fibroids or polyps). Defective vascularization of endometrium leads to improper placentation and finally pregnancy loss. Congenital uterine anomalies are usually also linked with second trimester

pregnancy losses. Septate uterus accounts for 76% risk of spontaneous abortion in affected women and it is the commonest uterine anomaly associated with RPL. Other uterine anomalies, like bicornuate, unicornuate, and didelphic uterus, have very low risk for RPL. Intrauterine adhesions result in early pregnancy losses due to its impact on placentation. It is found that RPL results if there is submucosal fibroid or intramural fibroids more than 5 cm size.

Anatomical factors responsible for first trimester recurrent pregnancy loss can be classified into two categories: Congenital factors and acquired factors. The congenital factors are Uterine septum, T shaped uterus, Bicornuate uterus and unicornuate uterus. Acquired factors are fibroids, polyps, synechiae, TB and adenomyosis.

### Investigations

Non invasive investigations, particularly imaging modalities form the mainstay of diagnosis of these conditions. While conventional 2D ultrasound may be good enough in most cases, the addition of more advanced imaging systems like 3D ultrasound and MRI may be valuable in some cases. Let's take a look at some of the important imaging modalities available.

**1. 2D Ultrasound:** conventional 2D ultrasound is easily available in most centres, and is cost effective. Trans vaginal ultrasound provides good diagnostic accuracy and has good patient acceptance. TVS visualises the endometrial cavity reliably, but is unable to provide reliable assessment in cases of septate Vs bicornuate uteri, and cannot measure volume in cases of T shaped uterus.

**2. 3D ultrasound:** is far more accurate in imaging minor defects of both the myometrium and the endometrium, and can provide reliable pre operative data for correction of septate, bicornuate and



T shaped uteri. It is also better for fibroid mapping, particularly multiple fibroids at varying locations. The major disadvantage is the increased cost over conventional 2D ultrasound

**3. MRI:** Like 3D ultrasound, MRI provides a complete 3D reconstruction of the uterus. It is specifically useful in cases of large and multiple fibroids, differentiating fibroids from focal adenomyomas, and for rare congenital anomalies of the uterus like Robert's uterus, OHVIRA syndrome, Accessory Cavitated Uterine Mass (ACUM) which may be misdiagnosed even by 3D USG.

### **Invasive investigations:**

**Sonosalpingography:** Transvaginal sonography when performed concomitantly with injection of a saline solution into the endometrial cavity, is called sonosalpingography. The saline delineates the inside of the endometrial cavity and intra cavitory lesions are seen clearly. It is a painless procedure performed in the OPD, and has no side effects

**1. Hysterosalpingography:** is a time tested investigation for the assessment of intra luminal pathologies like septate uterus, submucous fibroids along with assessment of tubal patency. The only disadvantage is that the procedure is painful and uncomfortable to the patient.

**2. Hystero laparoscopy:** forms the gold standard for the diagnosis and treatment of most anatomical causes of infertility and recurrent abortion. It offers a “see and treat” approach to the disease, and any pathology can be corrected in the same sitting

### **IMPACT ON FERTILITY AND TREATMENT OF INDIVIDUAL PATHOLOGIES**

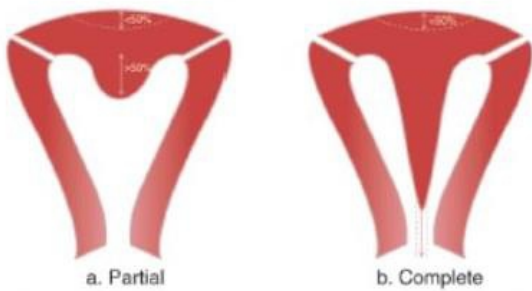
Though several factors, either congenital or acquired, may co -exist with a history of recurrent pregnancy loss, they may not always have a direct cause-and -effect relationship. This means that all pathologies that are diagnosed by routine imaging methods may not necessarily require treatment, for improving reproductive outcome in a given patient. In operating upon a patient who does not require surgery, the surgeon may do more harm than good, and post operative sequelae may worsen the fertility prognosis.

### **UTERINE SEPTUM**

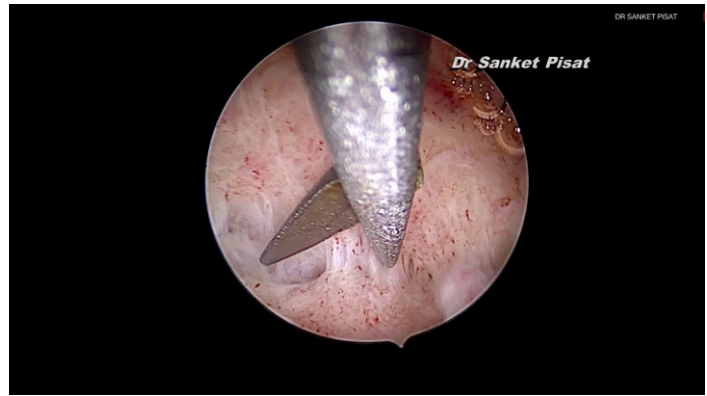
**Definition:** To understand the impact of a uterine septum on fertility, it becomes necessary to first define a septum. Earlier, an inward indentation of the fundal midline of 1 cm or more was considered an acceptable limit to differentiate between a septate and arcuate uterus. While the septum was considered worth correcting, an arcuate uterus was considered a physiological variant and required no surgery

However, the present consensus based on the CONUTA (Congenital Uterine Anomalies) classification by ESHRE defines a septum to be “an inward indentation of more than 50 percent of the uterine wall thickness as measured on 3D USG. This means drawing an “inter-ostial line” joining the 2 ostia on a coronal section of the uterus, and measuring the distance above and below this line at the midline

**Class U2/septate uterus**



**FIG 1: Septate / Arcuate / Normal uterus (CONUTA classification)**



**2: Incising the septum with hysteroscopic scissors**

**Surgical correction:** Hysteroscopic correction of the septate uterus is done by dividing the uterine septum to join the 2 halves of the uterine cavity. This may be done using either the cold hysteroscopic scissors or a Colin's knife with electrical energy. The former is preferred due to minimal damage to the surrounding endometrium (Fig 2). Care has to be taken to stay in the midline to avoid cutting into either the anterior or posterior wall, and the end point of surgery at the fundus is the visualisation of the two ostial openings in one straight line. This improves the available space in the uterus and divides the fibrous septum, thus enabling endometrial growth over the cut parts and effective implantation in subsequent cycles. In cases of complete vaginal septum (i.e. extending from the fundus upto the vagina, the cervical part of the septum may be left undivided to prevent cervical incompetence after surgery.

**Impact on fertility:**

The ASRM, in its guideline states that there is insufficient data to show that the presence of a septum adversely affects fertility. But it also states that there is 'fair' evidence that the presence of a septum causes miscarriage and preterm birth. A recent Cochrane review stated that there was no evidence of any benefit of the procedure in infertile women. Yet, in the authors personal opinion, the procedure does have significant fertility enhancing effects in patients of recurrent pregnancy loss where other factors have been ruled out. [1]

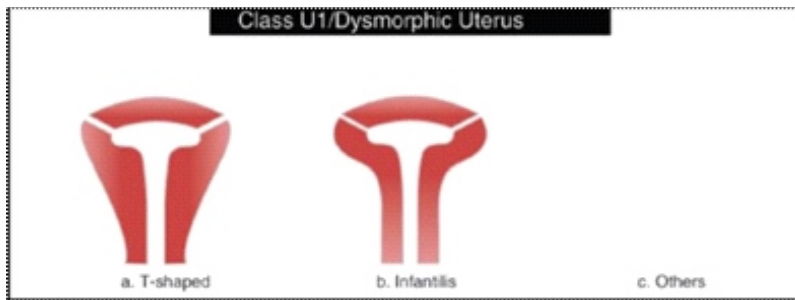
**T SHAPED UTERUS**

**Definition:** A T shaped uterus is one with convergent lateral walls, that reduce the volume of the endometrial cavity. These are proposed to have decreased blood supply, thereby causing implantation failure and subsequently, abortions. The CONUTA classification has classified T shaped uterus into 2 subtypes: (Fig 3)

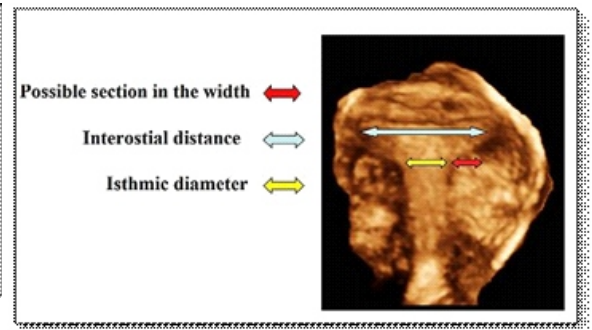
**Class U1 a:** This is a uterus which is morphologically normal with a ratio of 2/3rd body and 1/3rd cervix. The reduction of space in the cavity is due to hypertrophy of the lateral walls. This type of T shaped uterus responds well to hysteroscopic lateral metroplasty.

**Class U1b:** This is a uterus which is morphologically abnormal with a ratio of 1/3rd body and 2/3rd cervix. The reduction of space in the cavity is due to the abnormal morphology rather than hypertrophy of the lateral walls. This type of T shaped uterus responds may not respond well to hysteroscopic lateral metroplasty.

**On 3D USG:** The interstitial distance is compared with the inter isthmic diameter on the coronal section of the 3D USG. A T shaped uterus is diagnosed when the interstitial diameter is more than 1.5 to 2 times the isthmic diameter (Fig 4)



**FIG 3:Types of T shaped Uterus**



**FIG 4: 3D USG of T shaped Uterus**

**Surgical correction:**

Surgical correction of the T shaped uterus involves making releasing incisions on the lateral walls of the uterus. This causes an expansion of the uterine volume. Correction is done either with hysteroscopic scissors or by electrocautery. As in the case of uterine septum, the cold scissors is preferred because it causes no collateral damage to the surrounding endometrium. The end point of surgery is being able to visualise both the ostia from the level of the internal os, and the appearance of fine blood vessels seen over the lateral walls after the fibrous tissue has been cut and the normal musculature is approached. (Fig 5)



**FIG 5: Hysteroscopic lateral metroplasty using scissors**

**Impact on fertility**

Recent studies show a significant beneficial effect of lateral metroplasty on reproductive outcome, when performed in indicated cases. Lateral metroplasty increased the volume of the uterus from a mean of 2.5±1 mL before surgery to 3.2±1 mL by the end of 1 year.

Lateral metroplasty increased the volume of the uterus from a mean of 2.5±1 mL before surgery to 3.2±1 mL by the end of 1 year[2]The live birth rate increased in a statistically significant manner following enlargement metroplasty. In parallel, the miscarriage rate was statistically reduced. In the subgroup of infertile patients, 49% of pregnancies which occurred were spontaneous.

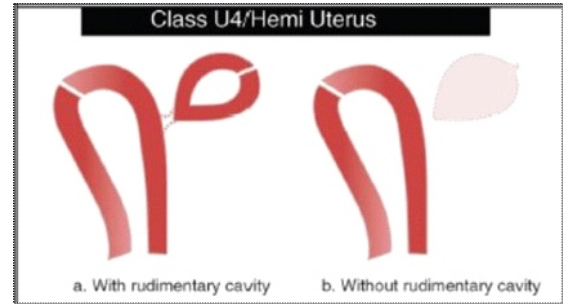
**UNICORNUATE / BICORNUATE UTERUS**

**Definition:** Unicornuate uterus is the development of only one of the 2 horns of the uterus, and results from non development of one of the Mullerian ducts. Bicornuate uterus, on the other hand is an incomplete fusion of the two Mullerian ducts resulting in two separate horns of the uterus. By and large, these anomalies do not have a significant detrimental effect on fertility, and patients are able to conceive naturally. (fig 6)

**Surgical correction:** corrective surgery is only indicated in patients having repeated losses. In cases of unicornuate uterus, the correction involves mild expansion of the cavity volume by a procedure



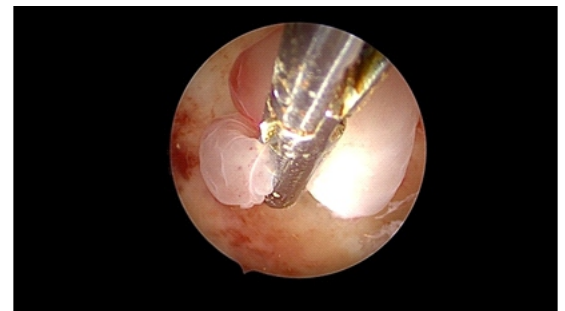
similar to hysteroscopic lateral metroplasty. In cases of bicornuate uterus, corrective surgery (unification of the two horns) is again indicated only in case of repeated second trimester losses. Routine correction in all cases by unification surgery may be detrimental, as the possibility of uterine rupture in late pregnancy exists and has been documented by authors



**FIG 6 : Unicornuate uterus  
ENDOMETRIAL POLYP**

An endometrial polyp is an overgrowth of endometrium that acts as a space occupying lesion within the endometrial cavity and affects implantation. These polyps may also be pre malignant in some cases. Whether polypectomy is required or not from a fertility point of view depends on the size and location of the polyp.

**Surgical technique:** Hysteroscopic polypectomy is done using hysteroscopic scissors, bipolar instruments like versapoint, or electrical instruments like resectoscope. Scissors are preferred as they do not damage the surrounding endometrium. However, for larger polyps, it sometimes becomes necessary to slice the polyp or shave it into smaller pieces for easy removal. After cutting with scissors, the polyp can be grasped with hysteroscopic grasper and removed. Alternatively, in the case of smaller polyps, the polyp can be directly avulsed from its base with a hysteroscopic grasper.



**FIG 7: Hysteroscopic polypectomy  
using grasper**

**Impact on fertility:** Current evidence supports the resection of endometrial polyps diagnosed prior to commencement of IVF cycles. There is Class II evidence that polyps may spontaneously regress in approximately 25% of cases, with smaller polyps more likely to regress compared with polyps >10 mm in length

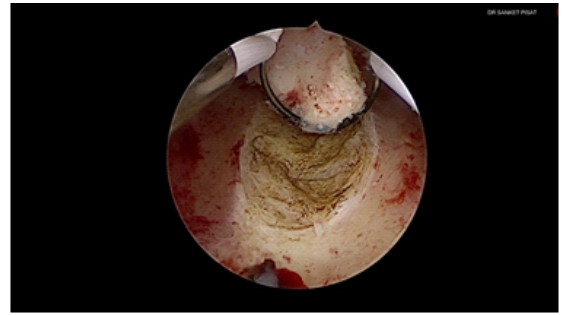
Several large studies suggest a beneficial effect of hysteroscopic polypectomy both prior to initial IVF and after failed IVF. There may be an added benefit of hysteroscopy itself in facilitating subsequent embryo transfer via dilation of the cervix or by increasing endometrial receptivity through endometrial injury. Patients can undergo ovarian stimulation after their next menses post polypectomy procedure without affecting IVF-ET outcomes[3,4]

### SUBMUCOUS FIBROIDS

Submucous fibroids have been associated with recurrent pregnancy loss and infertility in several published studies over the years. These fibroids are classified from type 0 (completely in the cavity) to type 3 (minimally projecting into the uterine cavity). Any fibroid that causes a distortion of the endometrial lining needs to be removed for enhancement of fertility.

### Surgical technique

Hysteroscopic resection of the submucous fibroid is carried out using an electrical loop and an instrument called the resectoscope. Earlier, glycine was used as the distension medium for electrosurgery in hysteroscopy, as it is a poor conductor of electricity. However, now bipolar electrosurgical systems have been developed. These special units allow the use of bipolar current underwater, thereby enabling the surgery to be performed using normal saline. This makes the procedure considerably safer. (Fig 8)



**Fig 8: Hysteroscopic resection with bipolar resectoscope**

### Impact on fertility

In asymptomatic women with cavity-distorting myomas (intramural with a submucosal component), myomectomy (laparoscopic/ hysteroscopic) may be considered to improve pregnancy rates. Myomectomy is generally not advised to improve pregnancy outcomes in asymptomatic infertile women with non-cavity distorting myomas.

There is fair evidence that hysteroscopic myomectomy for submucosal fibroids (Type 0,1,2) improves clinical pregnancy rates. (Grade B evidence)[5]

### INTRA UTERINE SYNECHIAE (ASHERMAN'S SYNDROME)

Asherman's syndrome is most commonly encountered in patients with history of prior surgical termination of pregnancy. The other commonly encountered causative factor is endometrial tuberculosis. Other lesser common pathologies are previous surgeries on the uterus like a myomectomy, resection of a septum etc

**Surgical technique:** Asherman's syndrome is a condition where surgical management in carefully selected cases yields excellent results. The adhesions may present as midline bands or as an overall narrowing of the cavity due to fundal or lateral wall fibrosis. Lysis of intra uterine synechiae is carried out with hysteroscopic scissors. In the author's opinion, excision rather than incision of these fibrous bands enables the surgeon to leave minimal fibrotic tissue behind, which may act as a foreign body and cause implantation defect, causing recurrent pregnancy loss. (Fig 9)

Post operatively, patients are given estradiol valerate for aiding endometrial growth. Many surgeons also prefer to put a barrier, like a Foley's catheter no 8, in the uterine cavity to prevent adhesions. Newer avenues in therapy are PRP injections, stem cell therapy, use of sildenafil citrate etc [6]

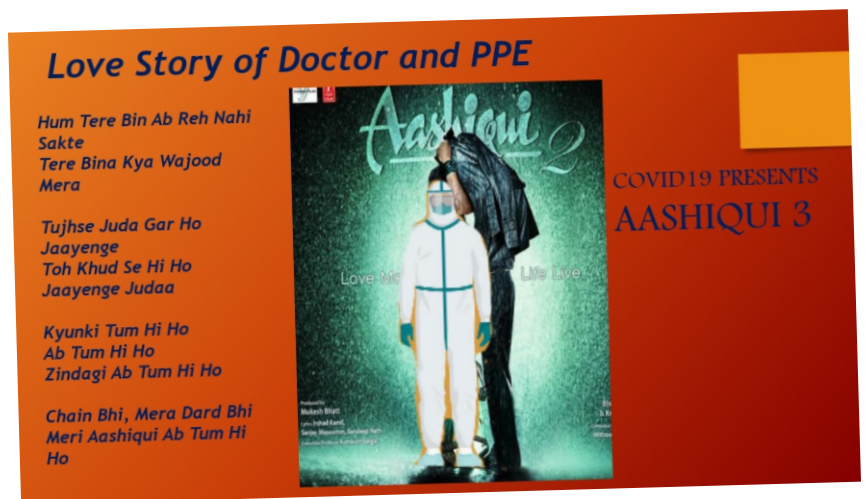


### Conclusion:

Correction of anatomical factors in first trimester recurrent pregnancy loss cases can be extremely rewarding in carefully selected patients. However, patients must be carefully screened to exclude any other causes of abortion that may be the actual reason for the patient's condition.

**REFERENCES**

1. RikkenJFW, KowalikCR, EmanuelMH, MolBWJ, van der VeenF, van WelyM, GoddijnM. Septum resection for women of reproductive age with a septate uterus. Cochrane Database of Systematic Reviews 2017, Issue 1. Art. No.: CD008576. DOI: 10.1002/14651858.CD008576.pub4
2. Ducellier-Azzola G, Lecointre L, Hummel M, Pontvianne M, Garbin O. Hysteroscopic enlargement metroplasty for T-shaped uterus: 24 years' experience at the Strasbourg Medico-surgical and Obstetrical Centre (CMCO). European Journal of Obstetrics and Gynecology and Reproductive Biology
3. Pereira N, Petrini AC, Lekovich JP, Elias RT, Spandorfer SD. Surgical management of endometrial polyps in infertile women: a comprehensive review. Surgery research and practice. 2015;2015
4. Kodaman PH. Hysteroscopic polypectomy for women undergoing IVF treatment: when is it necessary?. Current Opinion in Obstetrics and Gynecology. 2016 Jun 1;28(3):184-90
5. Practice Committee of the American Society for Reproductive Medicine. Removal of myomas in asymptomatic patients to improve fertility and/or reduce miscarriage rate: a guideline. Fertility and sterility. 2017 Sep 1;108(3):416-25.
6. Salazar CA, Isaacson K, Morris S. A comprehensive review of Asherman's syndrome: causes, symptoms and treatment options. Current Opinion in Obstetrics and Gynecology. 2017 Aug 1;29(4):249-56





## Genetics and Recurrent Pregnancy Loss



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The definition of recurrent pregnancy loss (RPL) has long been debated and differs among international societies. For the ESHRE and the RCOG, RPL refers to 3 consecutive pregnancy losses, including nonvisualized ones. However, according to the ASRM, it is defined as two or more clinical pregnancy losses (documented by USG or HPE), but not necessarily consecutive.

Spontaneous pregnancy loss is the most common complication of pregnancy. Approximately 70% of human conceptions fail to achieve viability, with almost 50% of all pregnancies ending in miscarriage before the clinical recognition of a missed period or the presence of embryonic heart activity.

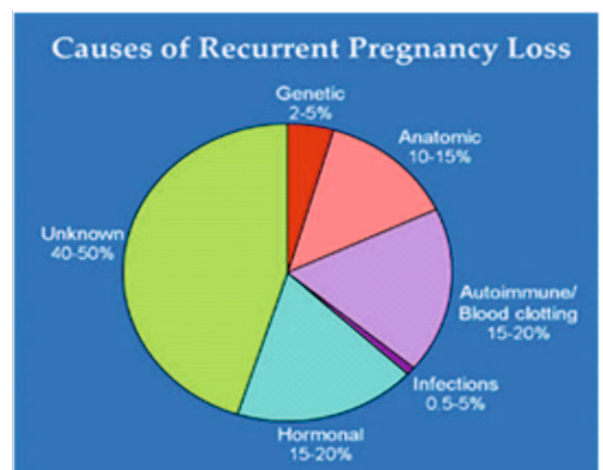
Genetic causes are the most common entities resulting in first trimester abortion. The frequency of aneuploidy is almost 90% in fetal loss in the first 6 weeks; about 50% in losses 8 to 11 weeks of gestation; 30% in those with 16-19 weeks and less than 10% above 20 weeks.

### GENETIC FACTORS AS THE CAUSE OF RPL

There are a variety of genetic factors that may result in failure of a pregnancy to develop. These include aneuploidy, chromosomal imbalances as a result of parentally harbored translocations or inversions, deletions or duplications of genetic information within chromosomes, and single-gene mutations.

Broadly, genetic factors may be divided into embryonic errors derived from known parental chromosomal abnormalities and embryonic errors that arise de novo in apparently chromosomally normal parents.

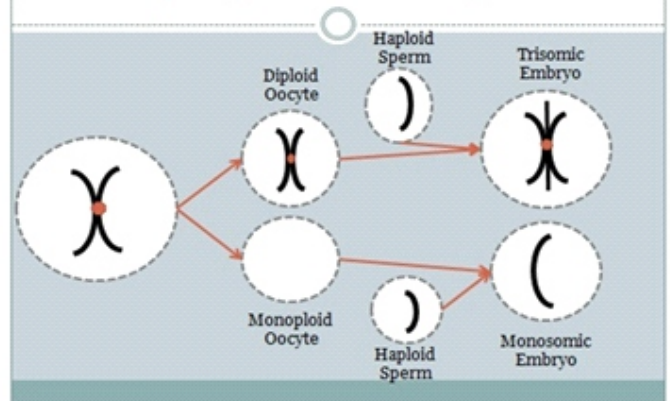
Most result from random errors in germ cell development that affect pregnancies in couples with and without a history of RPL equally. Typically, numerical aneuploidy results from meiotic nondisjunction in the germ cells of couples with normal parental karyotypes, and the recurrence of a particular abnormality in future pregnancies is rare.



**Chromosomal findings in RPL**

Apparently normal	40%
Abnormal	60%
•Trisomy (47 chromosomes – 1extra)	30%
•45X (45 chromosomes – one missing)	10%
•Triploidy (69 chromosomes – three sets)	10%
•Tetraploidy (92 chromosomes – four sets)	5%
•Other chromosome anomalies (e.g. structural anomalies)	5%

**Aneuploidy: Meiotic Nondisjunction**



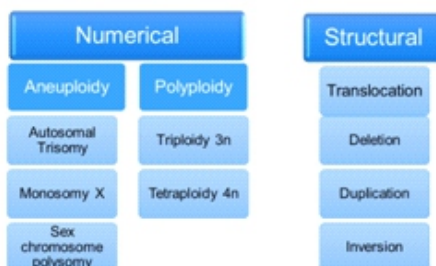
Parental chromosome anomalies occur in 3-5% of couples with RPL as opposed to 0.7% in the general population.

Balanced translocations are the most common chromosomal abnormalities contributing to RPL. In couples with RPL, this abnormality is found more frequently in the female partner at a ratio of 2:1 up to 3:1. Recent data from PGD has shown that embryos resulting from parents harboring a balanced reciprocal translocation have rates of unrelated chromosomal aneuploidy at rates exceeding 35%. Studies indicate that when the Robertsonian translocation is maternal, there is a greater risk that the fetus will exhibit an unbalanced phenotype. The vast majority of early pregnancy losses (50%–60%) are the consequence of chromosomal abnormalities, which can be of parental origin, or arise de novo in the embryo from parents with normal chromosomes

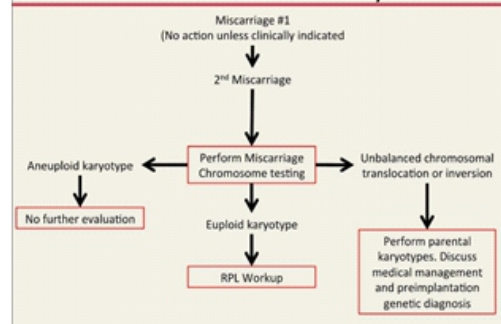
The most common parental abnormalities are balanced translocations, found in 2%–4% of cases of RPL, compared to 0.7% in the general population. All balanced translocations can be detected by ordering a peripheral karyotyping in parents. Parents carrying balanced translocations are usually asymptomatic. The karyotype of their product of conception (POC) can be entirely normal or have a balanced or an unbalanced translocation. Pregnancies with unbalanced translocations usually end in miscarriage – which is often seen as a natural selection mechanism – but can also lead to stillbirths, or even live births with major congenital defects.

Because most cases are de novo errors, the risk of an embryo aneuploidy occurring in a subsequent pregnancy is low, and the higher the number of miscarriages, the less likely they are to be related to chromosomal abnormalities. The incidence of embryo chromosomal abnormalities is thus lower in women with RPL than in those with sporadic miscarriages.

**Chromosomal abnormalities**



**Initial Evaluation for Early RPL**



**INVESTIGATION/LAB EVALUATION**

- Couple Karyotype should be done in
- ✓ Repetitive first trimester losses
- ✓ Anembryonic pregnancy
- ✓ History of malformations or mental retardation in previous pregnancy
- ✓ Advanced maternal age

Knowledge of the karyotype of the products of conception allows an informed prognosis for a future pregnancy outcome to be given. While a sporadic fetal chromosome abnormality is the most common cause of any single miscarriage, the risk of miscarriage as a result of fetal aneuploidy decreases with an increasing number of pregnancy losses. If the karyotype of the miscarried pregnancy is abnormal, there is a better prognosis for the next pregnancy.

The triad of analysis includes the POC and the samples of both the parents.

Significance of Chromosome Testing of Embryonic Material/ parental blood: Miscarriage tissues provide a rich source of material for research on the origins of chromosome errors. The opportunity can be utilised only if counselling is done in advance and the parents are explained about the need for the tissue analysis. This is because the products of conception may be minimal and there is a need to send with appropriate precision for analysis. In more than half of cases (and in more than 80% in older women), the cause of the miscarriage is identifiable. Detection of numerical error in chromosomes entails no further testing or treatment, since:

a. it is mostly non-recurrent

b. the risk of another miscarriage is not increased above that of any woman of the same age.

Current data suggest that routine karyotyping of couples with recurrent miscarriage cannot be justified. Selective parental karyotyping may be more appropriate when an unbalanced chromosome abnormality is identified in the products of conception.

## **TREATMENT OPTIONS**

Genetic counselling & Familial chromosome studies.

Reproductive options in couples with chromosomal rearrangements include proceeding to a further natural pregnancy with or without a prenatal diagnosis test, gamete donation and adoption.

PGD has been proposed as a treatment option for translocation carriers. Since it necessitates IVF, couples with proven fertility need to be aware of the financial cost as well as implantation and live birth rates per cycle

Furthermore, they should be informed that they have a higher (50–70%) chance of a healthy live birth in future untreated pregnancies following natural conception than is currently achieved after PGD/IVF (approximately 30%).



## **After PG- the road ahead: Young guns who've been there, done that! Gynecological Endoscopy**



### **Dr. Gaurav Desai**

MS FCPS

Pelvic Surgeon & Fertility Specialist  
Assistant Professor Seth GS Medical College  
and KEM Hospital  
Member, Managing Committee MOGS



### **Dr. Pranay Desai**

MS, DNB

Consultant Obstetrician & Gynecologist  
Gynecological Endoscopic Surgeon  
Cosmetic Gynecologist  
Nirmala Multispeciality Hospital, Mahalaxmi  
Wockhardt Hospital, Mahalaxmi  
Active Member of Youth Council of MOGS.

"We interviewed two young - established Gynec-Endoscopic surgeons to know what drove them getting their hands onto their laparo and hysteroscopes."

### **Can you both tell us where did your passion for endoscopic surgery start?**

Gaurav: My passion for endoscopy started by seeing my father perform endoscopic surgeries at workshops and of course when I was a trainee in medicine. I felt endoscopic surgery is the right blend of artistry and treating a patient using skill, medical knowledge and technical knowhow all at the same time.

Pranay: My passion for surgery got me interested in Gynec-endoscopy. My first ever encounter with laparoscopy was when I attended a lecture by late Dr. Rakesh Sinha, back in my undergrad days. I was in awe! I could not believe that someone could perform an entire hysterectomy just by making a few, centimeter-sized incisions on the abdomen. Since then, I have taken active efforts to know more about the field and have been fortunate for having met great mentors to guide me through.

### **Is Training in Degree / Diploma enough for someone to practice Endoscopy right after post-graduation?**

Gaurav: I believe a superspecialisation and degree is not necessary as long as you see and perform a large number of procedures in endoscopy. Endoscopy is now a must know even at the postgraduate level.

Pranay: The primary degree or diploma in Obstetrics and Gynecology is enough to practice endoscopy. Any surgical skill requires adequate exposure and practice. If the primary institute for PG training has teachers performing endoscopic surgery, the students will have a fair enough exposure. In the future, however, a time may come when a special degree in Minimally Invasive Surgery may become mandatory. In this regard, there are institutes offering MUHS recognized fellowship. At present the best proof of credibility is the log book of one's own cases.

### **How does one go about training for endoscopic surgery?**

Gaurav: Today there are many more avenues and opportunities available for endoscopic surgery. As an assistant professor at one of the largest municipal institutes in the country, I have the opportunity to learn from teaching medical students and residents.

There are also fellowships and training programs. However I learnt a fair amount by assisting surgeons during live operative workshops across the country. Additionally there are many endoscopy videos on YouTube and social media platforms that I watch after dinner or whenever I have free time during my duty hours. Piggy backing with freelancer endoscopists on holidays has also helped me.

Pranay: Training in endoscopy may be broadly divided into Fellowship Programs (Short - 3 months and Long - 6 - 12 months), Specialized Courses (Basic & Advanced) and Workshops. Fellowship programs give an in-depth knowledge about the subject, starting from basic leading up to advanced surgeries, along with good hands - on training. The Specialized Courses are usually for a period of one to four weeks and concentrate on a particular topic with fewer hands-on training e.g. Laparoscopic Hysterectomy course, Retroperitoneal anatomy course, Hysteroscopy course etc. While Workshops last from one to seven days, they provide a general idea about the topic with minimal or no hands-on training.

### **Did you train with freelancing surgeons or at an institute? What would you recommend?**

Gaurav: Yes I did follow some of the laparoscopic surgeons around the city of Bombay when I had free time and also travelled with them across the country during my vacations or when I took leave. Performing endoscopy yourself as a faculty at an institute and applying the knowledge you have gained also helps you a lot.

Pranay: I had the opportunity to work with freelancing surgeons as well as at an institute. Both have their strengths and flaws. Freelancing surgeons provide an intimate and in depth knowledge but with limited hands-on exposure. Institutes, although, provide a thorough training with adequate hands-on experience, may lack the personal touch. However, in either form of training, it is extremely important to have a one-to-one preceptorship in the initial part of the learning curve.

### **Currently which are the best institutes for endoscopy?**

Gaurav: There are a number of good institutes for training in various parts of India. The most prominent places to go are down south in Kerala and Chennai as well as in Mumbai, Ahmedabad and Pune too. At Mumbai, one can learn from practicing at tertiary hospitals where one can observe some good endoscopic surgeons operate as well as in peripheral hospitals where one can get a lot of free-hand operative work.

Pranay: A lot of institutes offer different types of training. A trainee, fresh out of PG who has little or no knowledge about endoscopy, should choose an institute which provides a comprehensive exposure inclusive of laparoscopy and hysteroscopy and which not only focuses on developing the surgical skill but also managing the patient condition as a whole.

### **What are the basic investments and equipments necessary to start endoscopic surgery?**

Gaurav: If one is strapped for money one can purchase a good second-hand equipment and make

initial mistakes on these before purchasing expensive endoscopic equipment from top of the line windows.

Pranay: I agree. One may settle for local made hand instruments. However, a good Three Chip HD camera and an LED / Xenon light source are indispensable and should not be compromised upon.

**What are the most important things before starting to operate ?**

Gaurav: The most important thing before one actually starts operating individually is first the knowledge of the operating equipment, the pathology as well as techniques and skills of endoscopic surgery. One can learn certain aspects of endoscopic surgery like suturing on pelvitrainers as well as watch videos and assist experts. One needs patience, skill and good hand eye coordination to perform successful endoscopic surgeries.

Pranay: Yes, I absolutely agree. The importance of practicing on an Endo-trainer cannot be stressed enough. I spent many hours on it to get my suturing skills right before taking a knot on a live patient. Performing your first endoscopic surgery independently after training will be an unforgettable experience. The number of things that may go wrong is unimaginable. Frustration will take over sooner than you know it. Hence, there is no shame in having help from an experienced surgeon assisting you in the first few cases.

**Any tips or advice for practice ?**

Gaurav: Endoscopy practice is different from what is done in institutions. One has to learn how to adapt and should not have an ego if one has to convert an endoscopic procedure into an open surgery. One must remember that the patient's life is most important.

Pranay: The advantage of endoscopy is that the surgery can be recorded. The best way to improve yourself is to review your own surgery over and over again. You will only excel if you are better than what you were in the previous surgery. And of course, you should have an undying hunger to learn more.





## **Reproductive Medicine**



**Dr. Shreedevi Tanksale DNB, DGO, FRM,DE**

Director, Little Miracles Fertility clinic



**Dr. Tejal Poddar MS,DFP,BIMIE,FRM,DE**

Director, Little Miracles Fertility clinic

### **IT ALL BEGINS WITH A DREAM.....**

Looking back on the last 9 years, reminds us of so many ups and downs. Both of us were co residents under Dr. Geeta Niyogi in KJ Somaiya Hospital. It was during our residency days that we were introduced to infertility as we had weekly infertility OPD. Dr. Kirti Bendre and the lectures taught us Follicular study scans. They taught basics on infertility along with minimal stimulation protocols. This is the time when we started developing interest in management of fertility patients. After completion of post graduation, we decided to join public hospital to gain more experience and improve our surgical skills. We completed a year of Senior resident post in LTMMC SION Hospital and KEM hospital. During these posts, also we were keenly involved in the infertility opds. This was the time we took experience of working in private practise with Dr. Shyam Desai and Dr. Kedar Ganla.

So in January 2016, both of us reached their Surat centre to begin the six months fellowship. It felt like being back to residency days. Initial few days we were lost. So many cycles happening. Daily ovum pickups and daily transfers. After first 10-15 days we got the hang of it. We started seeing patients from first consultation to workup and then start of protocol. After a month in Surat we shifted back to Pardi and that's when the roller coaster began. Our day would typically begin with Pick ups followed by Embryo transfers then OPD followed by lunchbreak at 3or 4 pm and then evening opd. Dr Purnima Nadkarni would be doing all this in a day and we would follow her everywhere. We learnt everything with her. She taught us how to talk to a patient. How to counsel patients. She took lectures in the morning time. With every patient she taught us why she selected this protocol. She taught us how to talk to a patient when cycle fails. She gave us insight into each and every aspect of fertility management. Alongwiththis ,we were also taught andrology and complete management of male infertility. We were so excited after doing our first OPU.

Two days in a week we also had laparoscopy training. Hysteroscopy is a basic tool for any fertility specialist. I was confidently doing hysteroscopies after two months into training. In these six months we also learnt how to do basic gynec scan alongwithobstretic and NT scan.

Alongwith this clinical learning, we were also exposed to laboratory work. The embryologist at the centre would take lectures for us. We would be screening for oocytes during pickup. Its equally

important to know what your embryologist does. This overall exposure in the six months that we stayed there gave us tremendous confidence.

We wanted to gain some international perspective. So we applied at some centres in USA and Belgium. We worked with Dr John Jarett at Indianapolis, USA. He is a senior fertility specialist with private practise. The way they talk to patients and their method of counselling is something we all should learn.

Luckily we were accepted at the prestigious Leuven University, Belgium. We completed hands on training in IVF protocols and Laboratory techniques in ART under Dr. Christen Meuleman and Dr Tomasetti. We recommend that all those want to pursue any super specialty must do an international course. These people are so welcoming and they are willing to share and exchange knowledge without any hangups. This is the place where we understood the advantages of doing group practice. That's when the ball started rolling that we should work together.

Post Belgium we went to Giessen Germany to finish International Laparoscopy training in ART under Dr. Prof Tinneberg. Every fertility specialist should know basic endoscopy and should be able to perform diagnostic endoscopy atleast. All these international courses, gave us lot of varied experiences and enriched our knowledge. After we came back, there was a big question mark-what now? Join some fertility centre chain or follow some fertility specialist? What to do next?

We met few fertility specialists in the city. We went to meet Dr Ameet Patki. He asked me everything about my training and then he said something that no one else had said to us before. Why don't you start on your own? Initially, we were shocked. But later we gave it a thought at length. We discussed all the issues we may face. We noted all the benefits we have since we both are passionate about the same subject and also the fact we have learnt same things throughout. This was the moment when we sowed the seed. We nurtured the idea and we gave it our heart, sweat and soul and our that's how our - LITTLE MIRACLES FERTILITY CLINIC was born. We decided on the basic framework of our work pattern. We have two opd clinics where both of us consult at mutually exclusive timings. We have our own IUI setup in our clinics. We did not go to any professional company to setup our clinic for us. We took quotes from vendors and ourselves designed the clinic. As we had closely observed the equipment used in all the centres, we knew what is essential and what is optional. We could setup our IUI lab in almost one third the cost that a professional had quoted (around 6 lakh rupees). We had decided that initially we may not get enough IVF cycles, so we could use already setup ART lab. The cost of setting up a fully equipped ART centre starts with atleast 1000 square feet space and laboratory setup costing anywhere between rupees 70 lakhs to 1 crore. To make this centre sustainable we need to have atleast 30 -40 cycles in a month.

You should also be aware about practicality of your decisions. We knew that we could not setup an IVF lab immediately. So we worked on a solution and are very happy working with another centre but with the freedom of managing our own practise. To start your own IUI setup, needs certain important things over and above the usual opd clinic. As we do our own follicular studies, we needed PCPNDT registration for the sonography machine and IUI clinic. There is wide range of

sonography machines available with cost ranging from rupees 3-10 lakhs. We need to maintain records, consent forms and details of all patients.

Throughout our journey till now we have always got positive support from all our teachers and mentors. The goodness that surrounded us inculcated so much positivity inside of us that we were able to serve all our patients with kindness and patience.

Everything we did till now was because we were focussed on what we wanted to do in professional life. We meet residents who don't know what they want to do. To all those who are clueless, we have to say one thing always make sure that you make your basic obstetrics and gynecology knowledge strong. Because you are foremost an OB GYN. Later on you may become an endoscopic surgeon or infertility specialist or oncosurgeon. Make sure you develop a strong base. Its good that we got little exposure of all the super specialities in our residency and SR post. That's how we decided our calling. We choose infertility management and concentrated on it. We were focussed on gaining maximum knowledge and experience in the subject we chose. The options available to us in India are FNB in Reproductive Medicine-2 year degree course or the six months ICOG course. Make sure that you find your calling. You cannot be jack of all trades but master of none. Explore all avenues and then make a choice.

There has been no better satisfaction in life than seeing the smiles on our patients face when they hold their kid in their arms. These smiles are our driving force to make us give our best care to our patients.

It is because of all the learning experiences and our constant endeavour to strive for the best possible care for our patients that we have been successful in giving babies to our patients. We have had our share of failures as well, but we never allowed them to overpower us. We faced our failures and we improved for the next battle.

Lastly we would like to say that learning never stops. Dont be ashamed to unlearn wrong and learn new things. Always follow ethical clinical practices. It will help you in the long run.





## **My journey as a Fetal Medicine Specialist.**

### **Dr. Ashwini Rathi**

MD (OBGY), MRCOG

Director – Mumbai Fetal Medicine Centre, Andheri.

Fetal Medicine Consultant Surya Mother and child Hospital, Santa Cruz.



In the rapidly evolving field of obstetrics; a sub specialty that has come to the fore front more so in the last decade is Fetal Medicine. Fetal Medicine involves three broad aspects of antenatal care – “Sonography” which is the corner stone of Fetal medicine (NT scan, anomaly scan, fetal echocardiography, fetal Dopplers), “counselling” and “pre-natal invasive procedures” (Amniocentesis, CVS, Selective fetal reduction, intra uterine transfusion, intra uterine lasers for TTTS, interstitial lasers for TRAP etc.).

Fetal medicine has slowly but steadily entrenched itself in routine antenatal care. Currently obstetrics without fetal medicine would be unthinkable and grossly incomplete.

During my residency at PGIMER – Chandigarh; I had my first fling with fetal medicine. I witnessed an intrauterine transfusion and it enthralled me. To give a successful outcome to an eight gravida with severe Rh isoimmunisation was to me the pinnacle of medical science. Thus began my journey of fetal medicine.

There weren't any well-defined DM or sub specialty training programs after OBGY when I passed out (there aren't any till date). There were 1-2 year fellowship options and I pursued one at Apollo Centre for Fetal Medicine with Dr. Anita Kaul. During my training I was exposed to the changing scene of prenatal diagnostics. Gone were those days when termination was the only option and parents didn't have a closure after poor outcomes.

With the rapidly changing international fetal medicine scene (Thanks to Professor Kypros, London) knowledge and practices were percolating to our country faster than I would have imagined. NT scans were becoming routine and anomaly scans were becoming increasingly systematic and detailed.

Combined with huge leaps in genetics; prenatal diagnostics now had answers for many couples with bad obstetric history or previous anomalous fetuses. Ultrasound technology has progressed so rapidly that it would put fetal MRI images to shame.

Thereafter during my stay in the UK; I witnessed intra uterine procedures like lasers for TTTS, tracheal balloons for CDH and since then there has been no looking back.

I chose to give up conventional obstetrics and dedicatedly practice fetal medicine till date.

An important aspect of fetal medicine is that it gives a chance of perfect work-life balance, which is something I treasure. Our career and family graphs often oppose each other directly... As we reach the late 30s-40s ...our clinical practice starts peaking. But this is also the time that our ageing parents and growing children need us the most. With fetal medicine one has an opportunity to maintain a well-stratified life.

Another balance it strikes is between clinical and academic work. It definitely gives time to collate

your thoughts and contribute meaningfully in the academic arena.

Most of the obstetricians feel the need for a fetal medicine input in the management of many of their patients esp. in the current situation of increasing high-risk pregnancies, precious pregnancies and litigation charged environment.

Therefore fetal medicine as a subspecialty is here to stay both in the corporate hospitals as well as the smaller maternity units across the country.

On the flipside a fetal medicine consultant might have to kiss goodbye to the sheer adrenaline rush of obstetrics, surgical exploits of gynecology, glamour of IVF or endoscopy and a bit of moolah. Is it worth the sacrifice?? I totally think so.

### **How to go about it:**

A residency program in OBGY is seldom enough to start practicing a sub specialty right away. Therefore, further training is a must. When one finishes residency, it would be a good idea to explore sub-specialties like infertility, high-risk obstetrics, endoscopy, gynecology or fetal medicine. This could be done during or after completion of bond by taking up observership or assisting seniors in those particular fields. Since it's an important juncture; take your time, as there shouldn't be regrets later. Also, a SWOT analysis of yourself is a good way to help you choose.

If one narrows down to fetal medicine; then fellowships is the way to go.

To the best of my knowledge currently there aren't any formal DM training programs after OBGY. The national board of examination offers FNB (Fellowship of National Board) programs that need an entrance exam. However; most of the other fetal medicine fellowships will need a good CV and an interview.

### **Fellowship options for fetal medicine (1-2 years):**

1. Apollo Fetal Medicine Centre, Apollo Hospital, New Delhi – Dr. Anita Kaul
2. Bangalore Fetal Medicine Centre, Bangalore – Dr. Prathima Radhakrishnan
3. Mediscan Centre, Chennai- Dr. S. Suresh.
4. FNB in maternal and fetal medicine- Fernandez Hospital, Hyderabad.

These are the oldest fellowship programs. Newer programs are being added to the list in different cities like Dr. Prashant Acharya – Ahmedabad, Dr. Chinmayee Ratha- Hyderabad.

Except for the FNB; none of the other fellowship programs have an exit exam. FNB however; will need a thesis and a formal exit exam. Thereafter international fellowships can also be pursued esp. in UK and Europe.

The fellowship training will be adequate for the honing scanning skills. However; intra uterine invasive procedures will have a longer and steeper curve to master. These can be gradually mastered by observing or assisting seniors.

A fetal medicine unit can be standalone or as part of a maternity unit. To start a standalone unit will need significant investment mainly due to the cost involved in the high-end sonography machines. Therefore, classically one starts free lancing and gradually moves on to the next stage.

Hope this helps young PGs in making the difficult choice. Because like Professor Albus Dumbledore said to Harry Potter... "It is not your abilities but your choices that define you".

## Mogs Masti

**MOGS MASTI** is a fun filled interactive quiz session introduced to make the academic program in online webinars more engaging. The MASTI winners win exciting prizes, announced during valedictory.

### 1. Youngistan Conference – 19th July, 2020

MOGS MASTI was conducted by Masters of Ceremony Dr. Shrutika Thakkar and Dr. Bhumika Kotecha Mundhe,. It featured two academic and one non-academic questions.

**NAME A LIFE SAVING OBSTETRIC INSTRUMENT USED IN PPH THAT THIS IMAGE REMINDS YOU OF..**



**MOGS MASTI - 1**

Answer : **Bakri Balloon**  
Winner : **Dr. Aditi Abhade, Mumbai**

**THE HCG RECEPTOR IS ALSO A RECEPTOR FOR WHICH OTHER HORMONE?**

**MOGS MASTI- 2**



The diagram shows hCG binding to a GPCR, activating G<sub>s</sub> and G<sub>i</sub>. G<sub>s</sub> activates PLC, leading to IP3 and PKC. G<sub>i</sub> activates AC, leading to cAMP and PKA. Both PKC and PKA lead to ERK1/2, which then leads to Steroidogenesis and Gene expression.

Answer : **Luteinizing Hormone (LH)**  
Winner : **Dr. Prachi Risbud, Mumbai**

**MOGS MASTI- 3 GUESS THE BRANDS**



**SEND YOUR ANSWERS ON 9223524599 SIDDHESH 9819386311 AMRUTA**

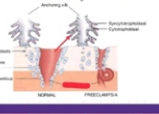
Answer : **Asian Paints, Bajaj, Dabur.**  
Winner : **Dr. Smriti Saxena**

### 2. MOGS Outreach Program – 25th July, 2020

The Outreach Program was conducted by the Masters of Ceremony Dr. Shreedevi Tanksale and Dr. Tejal Poddar. The MASTI session had an academic and a non-academic question each.

**MOGS MASTI-1**

Preeclampsia is characterized by incomplete invasion of \_\_\_\_\_ arteries by extravillous trophoblast.




**MOGS MASTI -1 EXCITING PRIZES**

**SEND YOUR ANSWERS ON 9769045194**

Answer : **Spiral Artery**  
Winner : **Dr. Riddhi Doshi**

**MOGS MASTI- 2 GUESS THE MOVIE NAMES-**



**SEND YOUR ANSWERS TO 9769045194 EXCITING PRIZES**

Answer : **Herapheri, KuchKuchHota Hai, Krish, Dilwale Dulhania Le Jayenge** Winner : **Dr. Kinjal Shah**



**Pearls of Wisdom**

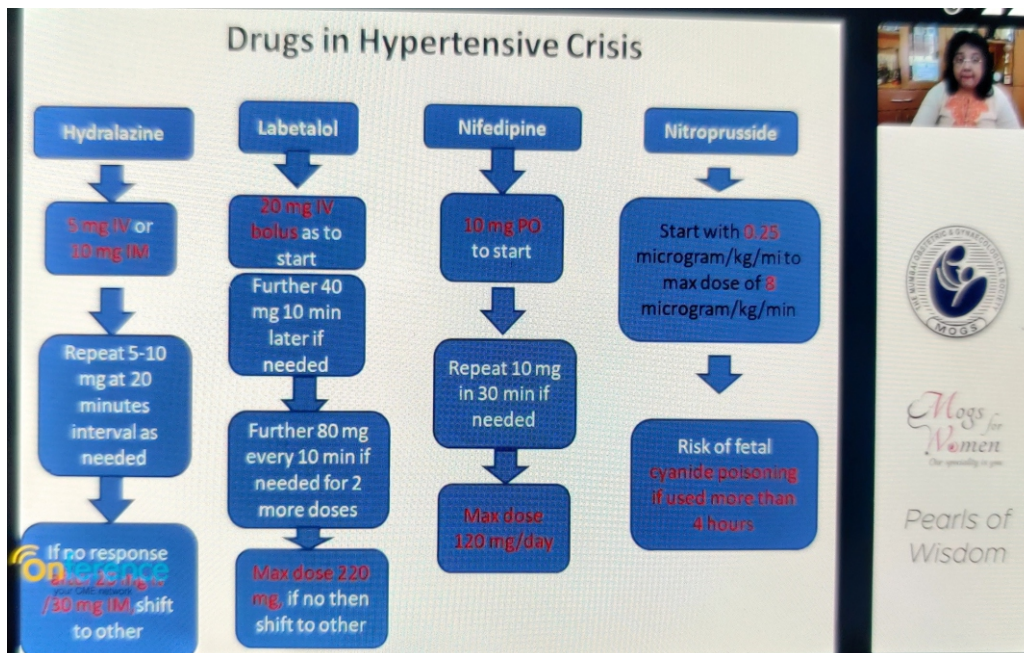
It gives us great pleasure to present to you ' **Pearls of Wisdom**', a series of short videos made by experts on interesting topics to you. Last month we sent three videos and now this month we present the next two videos in the series. You all have received these videos via email.

Episode 4 -  
Drug Therapy for Preeclampsia, **Dr. Reena Wani**

<https://www.onference.in/c/drug-therapy-for-eclampsia/1463>

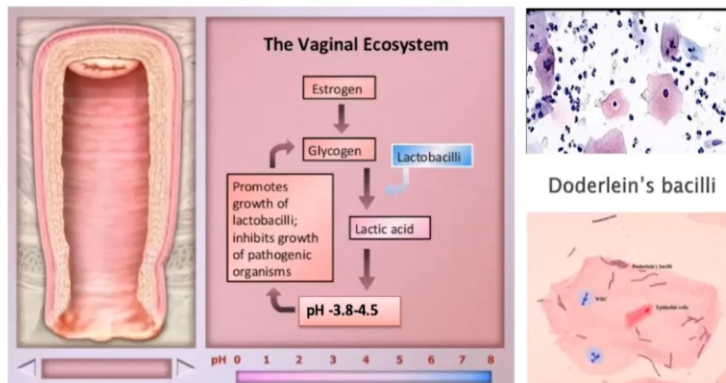
Episode 5- Probiotics in Vaginal Health- **Dr. Ameya Purandare**

<https://www.onference.in/c/probiotics-in-vaginal-health/1464>



**Protective Vaginal Ecosystem**

The vaginal microbiota provide a first line of defense in the ♀ reproductive tract



Lactobacilli (**Doderlein bacillus**)  
The dominant inhabitants & the cornerstone of vaginal health

Ravel J. Translating the vaginal microbiome: gaps and challenges. *Genome Medicine*. 2016;8:35.

**Fit Is It Team**



**Dr Rishma Pai,**  
President, MOGS.



**Dr Anahita Chauhan,**  
Secretary, MOGS.



**Dr Komal Chavan**



**Dr Madhuri Mehendale**  
Managing Council Members, MOGS.



**Dr Amrita Tandon**



**Dr Aditi Tandon**

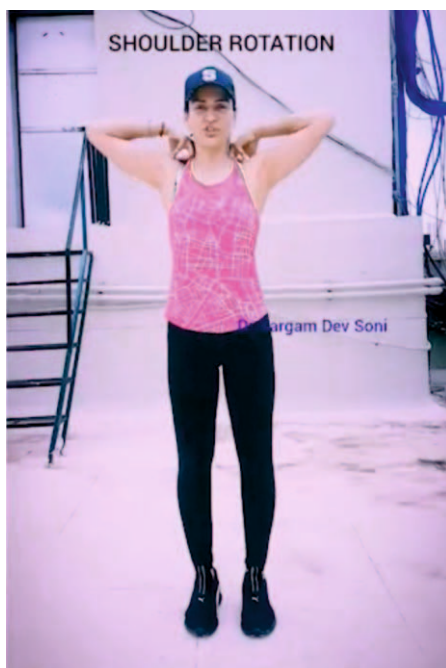
Youth Council Members, MOGS.

Contributor : **Dr Sargam Devkrishna Soni.**

Consultant Gynecologist, Obstetrician,  
Infertility Expert. Mumbai, India.  
Youth Council Member, MOGS

“FIT IS IT” is the MOGS Matra for the year 2020. Recognizing the importance of fitness in the hectic lives of us doctors, the FIT IS IT team at MOGS, showcases short fitness videos, healthy food recipes and motivating stories in every program, conference and newsletter for the year 2020. These will inspire us to get MOVING even though the world is on a LOCKDOWN.

**Dr. Sargam Devkrishna Soni : 19/07/2020 – Youngistan Conference**





## Organ Donation

On 1 st July 2020, we at Mumbai Obstetrics and Gynecological society decided to, change the ending to someone's story – by pledging to the cause of organ donation under the able leadership of our president Dr Rishma Dhillon Pai and Secretary Dr Anahita Chauhan. It was a drive which was conceptualized by our FOGSI President Dr Alpesh Gandhi and 47 of our MOGS members held banners and took the solemn pledge and also motivated other medicos as well as well as non-medicos to take the Pledge!

**#MOGSPLEDGESFORORGANDONATION #PLEDGEFORORGANDONATION  
#LIVEAFTERDEATH #LIFEISAMAZINGPASSITON #IDONATE**



**THE MUMBAI OBSTETRIC AND GYNAECOLOGICAL SOCIETY  
IN ASSOCIATION WITH FOGSI  
PLEDGES FOR ORGAN DONATION  
1ST JULY 2020**

1) DR ADITI TANDON 2) DR NIDHI GANDHI 3) DR GOURI GUPTA 4) DR RIDDI DESAI 5) DR PRITMALA GANGURDE 6) DR NEELAM BHISE 7) DR KAUSHA SHAH  
8) DR GARIMA SHARMA 9) DR AMITI AGARWAL 10) DR TEJAL PODDAR 11) DR SHREDEVI TANKSALE 12) DR ADITI TANDON 13) DR BHUMIKA KOTCHA  
14) DR SHEETAL SAWANKAR 15) DR BHAVINI SHAH 16) DR JAGRUTI NALAVADE 17) DR SHRUTI THAR 18) PREETI DESHPANDE 19) DR DEEPA KALE 20) DR SIDDESH IYER  
21) DR JITEKA THAKKAR 22) DR SUSHIL SHINDE 23) DR KEVIN GALA 24) DR SARGAM SONI 25) DR RIDDI DOSHI 26) DR ASHWINI KALYANKAR  
27) DR MEDHA TANKIWALA 28) DR KUNAL DOSHI



**THE MUMBAI OBSTETRIC AND GYNAECOLOGICAL SOCIETY  
IN ASSOCIATION WITH FOGSI  
PLEDGES FOR ORGAN DONATION  
1ST JULY 2020**

1) DR ROHAN PALSHEKAR 2) DR UNNATI MAMTORA 3) DR MADHURI PATIL 4) DR SANKET PISAT 5) DR VANITA RAUT 6) DR PRITI VYAS 7) DR PUNIT BHOJANI  
8) DR MANSI MEDHEKAR 9) DR GEETHA BALSARKAR 10) DR SARITA BHALERAO 11) DR JAYDEEP TANKI 12) DR RISHMA PAI (PRESIDENT MOGS) 13) DR ANAHITA CHAUHAN ( SECRETARY MOGS) 14) DR SUVARNA KHADILKAR 15) DR ATUL GANATRA 16) DR SHRUTIKA THAKKAR 17) DR RITU HINDUJA 18) DR SHREYA PRABHOO  
19) DR PRIYA VORA



**Are you a true Mumbaikar?  
Have you been there done that?**

**Strike out if you have done any of these activities in MUMBAI**

*MUMBAI*  
**Bingo**

BEEN TO A FILM SET	TAKEN A FERRY RIDE	HAD SARDAR PAV BHAJI	BEEN TO ESSEL WORLD	BEEN TO MT MARY FAIR
TRAVELED WITHOUT TICKET IN LOCAL	FOUGHT WITH AUTO WALA	BUMPED INTO A CELEBRITY	TOOK WEEKEND TRIP TO LONAVALA	WALKED IN KNEE DEEP WATER TO WORK
SEEN SUNSET AT MARINE DRIVE	HAD KIRTI COLLEGE VADA PAV	<i>Free</i>	RAN MUMBAI MARATHON	HAD FILTER COFFEE @ MATUNGA
MISSED A MEETING DUE TO TRAFFIC	GOT WET IN MUMBAI RAINS	WAITED IN Q AT LALBAUGCHA RAJA	SHOPPED AT KALA GHODA FEST	GOT TIFFIN THROUGH DABBAWALA
SEEN A PLAY @ NCPA	BOUGHT MOVIE TICKET IN BLACK	STROLL AT JUHU BEACH	HAD MUCHCHAD PAN AT MIDNIGHT	BEEN TO BORIVALI NATIONAL PARK

*HELP THE DOCTOR FIND HER MASK*

**GYNE SCRAMBLE**

Unscramble The Words And Write The Letters In The Boxes.

Use The Letters In Shaded Boxes To Form A New Word That Answers The Riddle.

EOICUMMN     

ORATOPMZSAE     

SMESIOIANCNTE     

TTCALYSSOB     

OEISRINMDSOTE     

GOCHRHODRAOTIAYPC     

YNAPECHLNAE     

SCHOPTOSYER     

OTNCEHRYMEPARRO     

**Q. THE OFFICIAL RECORD OF PROGRESS OF LABOUR IS CALLED AS?**

ANSWER TO RIDDLE--PARTOGRAM  
CRYPTOMENORRHEA  
HYSTEROSCOPY  
ANENCEPHALY  
CARDIOTOCOGRAPHY  
ENDOMETRIOSIS  
BLASTOCYST  
AMNIOCENTESIS  
SPERMATOZOA  
MECONIUM  
ANSWER KEY

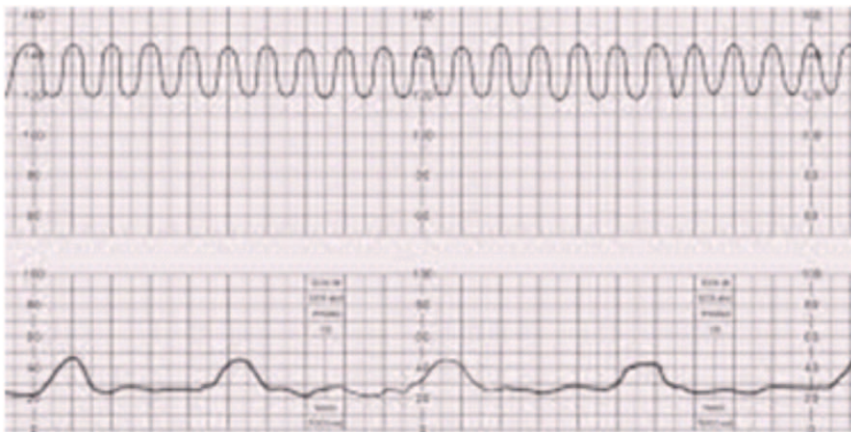
**SPOT DIAGNOSIS**

1.



GUESS THIS RARE COMPLICATION OF TWIN PREGNANCY

2.



WHAT IS THIS PATTERN IN CTG?

**3. GUESS THE ANOMALY**



## Recipe

### Cinnamon Beetroot Halwa

Healthy, sugar free, antioxidant rich dessert!

By **Dr. Aditi Tandon**



#### INGREDIENTS

2 beetroots, 1 apple, 200 ml coconut milk, 1 tbsp jaggery powder/ equivalent stevia powder, 3 - 4 tbsp pure ghee, 1 tsp cinnamon, Handful of nuts, Almonds, Walnuts, Dry figs, Dates, Raisins Optional - Dried Cranberry, Blueberries



#### Recipe

Prep - 20 mins

Grate the apple and beetroot. Cut the nuts and dry fruits fine.

Cooking time - 80 mins.

Steps:

1. Take 2 to 3 tbs ghee in a non-stick pan and add the grated beetroot to roast on a slow flame. Add the grated apple to the pan. Roast well for 40 to 45 mins. When roasted adequately, add the coconut milk to pan and let it simmer for 15 - 20 mins on a slow flame. Add jaggery powder or stevia for sweetness as per taste. A small quantity goes a long way as beetroots are naturally sweet!
2. On a separate pan, take 1 tbsp ghee and roast the nuts and dry fruits for 10 to 15 mins.
3. Add the nuts and dry fruits to the pan. Add 1 tsp cinnamon to taste. Your healthy halwa is ready! Enjoy guiltlessly as this desert has a wealth of healthy ingredients and also tastes delicious!

### Gujarati Raab Recipe

By **Dr. Kinjal Shah**



The traditional Gujarati Raab Recipe is a healthy and nutritious porridge. It is served mostly during winter time to keep warm and given to people who are recovering after a bout of illness to recover strength and built up their stamina (energy drink). Very good and useful in this corona pandemic.

#### Recipe:

TIME TO COOK: 20 - 25MIN

#### INGREDIENTS:

2 tablespoon Gond / Gondh/ Gundar( Edible gum), 3 tablespoon Ghee, ¼ cup jaggery , 2 tablespoon Sooth ( Dry ginger powder), 1 tablespoon Pipramul powder, ½ cup dry coconut crushed, ½ cup crushed almonds, 2 cup water

#### METHOD:

In a pan take Gond and Ghee and on slow flame cook it till the Gond swells. Add 2 cup of water thereafter and stir well on slow flame till the Gond dissolves completely. Add jaggery + Soonth + Pipramulpowder and boil it for 5min. Add crushed dry coconut and almonds to the mixture and boil it till the mixture is thick. Gujarati Raab is ready to be served hot.





## PESSARETTU

By **Dr. Bhavini Shah**



### INGREDIENTS

2 cups Green Gram ( Moong ) soaked overnight, Coriander leaves, Ginger chopped, Green chilli as per taste, Cumin seeds, Salt as per taste, 1/2 cup Rice soaked overnight ( optional )

### METHOD

1. Wash and soak the green gram in warm water overnight ( app. 6 hrs)
2. If you wish to add rice, you can soak that too with the green gram.
3. In a Mixer, blend the green gram, coriander leaves, ginger green chilli cumin seeds and salt with some water to make a smooth batter like that of a dosa batter.
4. Heat a nonstick or a dosa pan till slightly hot.
5. Pour the batter with a ladle and spread it into a thin round layer with the base of the ladle.
6. You can use Ghee ( optional ) to roast it.
7. Ensure that the Tawa is not very hot when you spread the batter. Cook it on medium flame.
8. You do not need to flip the side. Once cooked well, it starts coming off the pan from the sides.
9. To make crispy pessarettu, Rice should be added or you can also add 1 tbsp rice flour.
10. Between two pessarettus, make sure to sprinkle some water on the pan and allow it to cool down a bit.
11. It can be served with coconut chutney. It tastes good with hot and sweet tomato ketchup as well. It can also be served with sauted onions.



## FUSION QESADILLAS

By **Dr. Riddhi Doshi**



### Fusion Qesadillas in 3 steps

#### 1. Stuffing

Keep chopped veggies ready in a cup(I used red & yellow bell pepper, broccoli, corn, zucchini). Saute these vegetables with butter on high flame in a pan till veggies become soft(roughly ½ minute). Add ½ cup of paneer cubes. Flavour it with chilliflakes, oregano & as per flavour.

#### 2. Sauce :

Quick mixture of Schezwan ,tomato ketchup and mayonnaise in your desired proportions.

#### 3. Tortilla

One can use ready made tortilla roti or make few cornflour+maida chapattis and keep it ready

#### The Final Assembly-

Take the tortilla and spread sauce on it evenly. Apply the prepared stuffing on individual roti on one half. Add cheese to it and fold it carefully into half moon shape. Apply butter on both sides of quesadilla and cook it on pan with low flame till it becomes crispy.



## Mogs Talent

Inspite of our hectic work schedules, some of our members take time out to follow their passions. We would like showcase some talented doctors from our MOGS family.



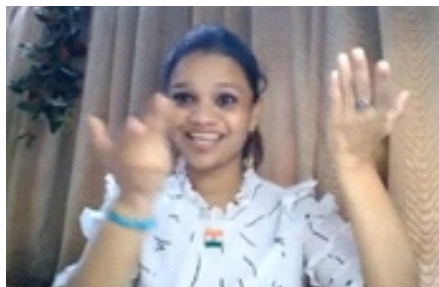
**Dr. Pradnya Changede** is learning classical singing from Suresh Wadkar's Ajivasan academy.



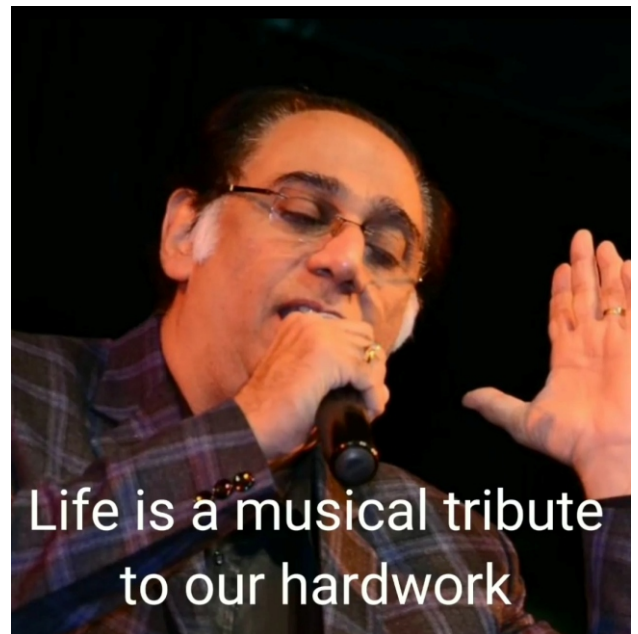
**Dr. Amrita Tandon** loves singing. You can hear one of her favourite songs by clicking on this link. <https://youtu.be/GoIQ0nYTrKQ>

As a tribute to COVID warriors, this video was made by Group of doctors. It is a soulful rendition of famous song- Mile sur meratumhara

<https://youtu.be/Uij4FEU9PnM>



**Dr. Riddhi Doshi** revisited her childhood days by restarting dance practise during lockdown. She now wishes to continue to pursue it alongwith work.

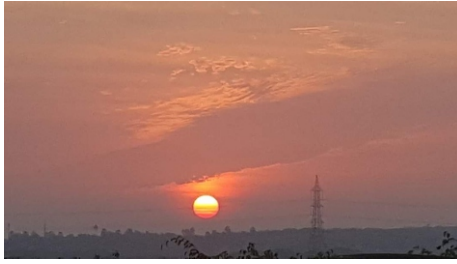


**Mile Sur Mera Tumhara**  
**Dr Bipin pandit**



Photos

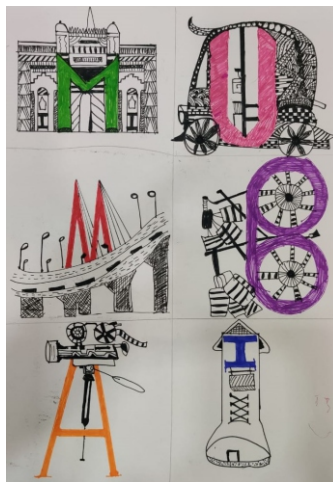
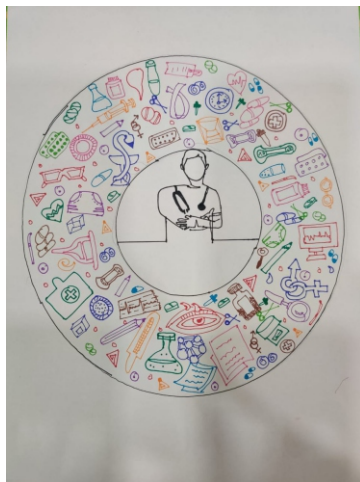
DR. SARITA CHHANAWAR CLICKS



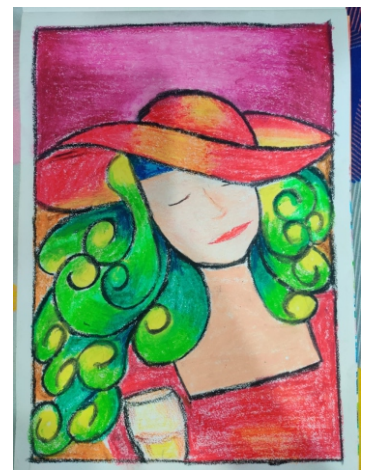
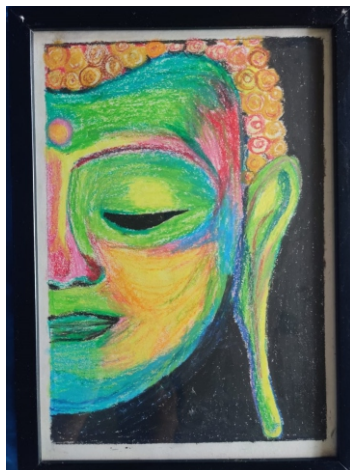
DR. SUSHIL SHINDE BIRDS PHOTOS



DR. TEJAL PODDAR - DOODLE



DR. SHREDEVI OILPASTELS





## Rakhi Special

'Raksha Bandhan' or 'Rakhi' is a special occasion to celebrate the bond of love between a brother and a sister. Some of our members or their children prepared handmade Rakhis to celebrate the occasion.

They made beautiful Rakhis using different articles easily available at home like silken thread, paper, crayons ribbon, etc. Their artisanship was quite fascinating. I am the kids thoroughly enjoyed this activity that tickled their creative side.



Little Aadya, 4 year old daughter of **Dr. Amruta and Dr. Siddheshlyer** made these colourful rakhis for her younger brother Adheet.



**Miss Vritti Mundhe** daughter of **Dr. Bhumika Kotecha Mundhe** has beautifully hand crafted this vibrant rakhis.



**Dr. Deepali Kali** has innovatively used quilling technique and crafted these pretty handmade rakhis.



**Dr. Shreya Prabhu** and her kids have prepared these glittery and colourful rakhis.



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**SMARTILON**<sup>™</sup> 30  
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