Mogs for Women
Our speciality is you

THE MUMBAI OBSTETRIC & GYNECOLOGICAL SOCIETY

MOGS MATTERS

OCTOBER 2020

Issue 4

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MOGS Youth Council 2020 - 2021

President's Message

Dear friends

It gives me great pleasure to bring to you the fourth 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. The editor Dr Shailesh Kore 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 'Conflict to Clarity' conference in August with many International and national experts sharing their experiences. Also the wonderful devotional songs by our chief guest, Padmashri Anup Jalota ji. It was the first time free papers were presented on a digital platform and this received an overwhelming response. I am sure you have benefitted from the many focussed webinars we have been doing. I hope the 'Pearls of wisdom' videos which you are receiving regularly are adding to your knowledge. Our digital PG training programme -The Dr N A Purandare practical training event which has hundreds of young doctors tuning in, is helping young doctors get ready for exams and clinical practise.

MOGS V Care & share programme was started by us to support our frontline workers and the women whose health we look after. PPE, N95 masks, face shields, fetal dopplers etc have been donated by us to all major and many peripheral municipal and government hospitals. We reached out to our resident doctors by giving immunity boosters etc in August and again in September, we have distributed care packages to all doctors and postpartum patients in government and municipal hospitals. We need your help and support for this ongoing programme . You can donate by online payment on MOGS website or by bank transfer.

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

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

Stay safe, Stay Healthy.

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.
Past President - FOGSI, ISAR & IAGE

From the Desk of Editor

Dr. Shailesh Kore
Editor

In every adversity lies the seed of an equal or greater opportunity
Napoleon Hill

What started as a very depressing year due to outbreak of covid-19 pandemic, has turned out to be a boon to education with the use of digital platform. The digital platform has enabled us, to reach out to a huge number of MOGS members. MOGS team ably led by our president Dr. Rishma Dhillon Pai, has made most of this by successfully reaching out to the members by arranging CMEs, webinars & online conferences. Another way of spreading knowledge is releasing focussed news letters having articles from eminent authors in the field. With this idea, of our president Dr. Rishma Dhillon Pai, has released eco-friendly, E-MOGS MATTERS with extensive academic content, reports of activities done in last quarter, information about forthcoming events and showcasing the hidden talents of our MOGS members, thus helping in elevating moods during pandemic.

India's very large population has significant implications for the future of Indian Economy with huge impact on India's resources. MOGS as a professional organization of Obstetrician and Gynaecologists, has the opportunity to bring about change in the mind set of the society by educating them about the need and options on contraception.

Though more than one billion people across the world use contraception for birth control, with the desire to raise healthier, educated & prosperous society & nation, there is huge unmet need of contraceptive use in India. It is well known fact that large number of births in India are unplanned, either because of unawareness or unavailability of contraceptive measures. It is obvious in many ways that contraception practices and prescriptions have the potential for changing societies for the better, and boosting a nation's economic growth

Keeping this in mind, this current issue of MOGS MATTERS has focussed on topics related to contraception, with articles from stalwarts in field like Dr. Nozer Sheriar & Dr. Atul Ganatra. Apart from this, the issue brings out some very interesting reads on teenage contraception and social issues and future of contraception. A word finder puzzle related to the theme topic and interesting facts and few tummy ticklers on contraception will hopefully keep you entertained.

On behalf of MOGS Managing Committee & the editorial team, we would sincerely like to thank all the contributors of this issue.

This issue was possible only because of untiring efforts by my co-editors Dr. Mansi Medhekar, Dr. Garima Sharma & Dr. Medha Tankhiwale

Education of both men & women is wonderful contraception
Henry Kendall

Best wishes to all MOGS Members
Stay Safe, Stay Healthy

Thanks & Regards
Dr. Shailesh Kore
MD, DNB, FCPS, DGO, DFP, DICOG
Professor & Unit Head T. N. Medical College & B. Y. L. Nair Ch. Hospital
Librarian, MOGS
Past Chairperson, Genetic and Fetal Medicine Committee, FOGSI

CO-EDITORS

Dr Mansi Medhekar

Dr Garima Sharma

Dr Medha Tankhiwale

MOGS V Care & Share Initiative

Activities In August - September 2020

Dr. Anahita Chauhan
MD, DGO, DFP, FICOG
Former Prof and HOU Seth G S Medical College and KEM Hospital
Secretary MOGS | Second Joint Assistant Editor JOGI

The MOGS V Care and Share Program is continuing its efforts in helping frontline workers and patients during the Covid pandemic. In August and September, we focussed on income generation through private donations, distribution of care packages to resident doctors, lecturers and patients in the major teaching hospitals.

Since the inception of the program, we have been able to raise more than Rs. 3 lakh from private donors, through sms campaigns and personal appeals.

Our major activity in August and September was the health, immunity and nutrition of resident doctors and lecturers who are in the front line. We distributed 400 care packages to residents and lecturers in all the major public and teaching hospitals - KEM, Sion, Nair, JJ, Cooper, Wadia, Bombay Hospital, Somaiya and DY Patil Medical College. Each package contained healthy non-perishable snacks like chikki, biscuits, and lassi which we have purchased through our own funds. Torrent Pharma supported this activity and added N 95 masks, sanitizer, nuts, calcium and Vitamin D tablets to each package. They also helped with the logistics and distribution. The bright red bags were greatly appreciated by all.

In addition, we also distributed 200 care packages to antenatal and postnatal patients in select teaching hospitals. These packages contained masks, soap, and chikki which were purchased through our own funds, along with a note in Marathi encouraging patients to stay safe. Torrent Pharma added N 95 mask, hand sanitizer, calcium and Vitamin D tablets and also provided logistical support in the distribution.

As a token of our support and appreciation of their efforts in these difficult times, approximately 100 senior professors and associate professors in the major teaching hospitals were given a small token of appreciation, along with a letter, from team MOGS.

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


REGESTRONE
Shelcal-XT
Shelcal-XT
Shot on OnePlus
By SANGRAM


V Care & Share Initiative
by
Mumbai Obstetric and Gynaecological Society
& Torrent Pharma
N95
Dettol
Shelcal-XT


Shelcal-XT
Shelcal-XT


LABOUR WARD
RECEPTION
REGESTRONE
Shelcal


REGESTRONE

Conflict 2 Clarity

CONFERENCE

Sunday, 30th August 2020

Conveners:
Dr Reena Wani | Dr Nagendra Sardeshpande | Dr Sanket Pisat | Dr Priya Vora | Dr Gaurav Desai

MOGS Virtual Conference "Conflict to Clarity" a focus on Controversial Gynaecological Issues was held on an online platform on Sunday August 30th, 2020 from 4.00pm - 8:30pm. The conference was conducted in association with three committees of FOGSI - Endoscopic Committee, Sexual Medicine Committee and Urogynaecology Committee.

For the first time in the history of MOGS, Free paper presentations were conducted on a digital platform. Papers were invited in 3 categories- conflict to clarity in obstetrics, conflict to clarity in gynaecology and interesting cases. A total of 48 papers were received.

Presentations were conducted across 2 parallel halls from 12 noon to 3 pm. 12 Senior gynaecologists were invited as judges for the sessions. Best paper prizes, senior and junior were awarded in each category. Prize winners received an e certificate and a gift voucher at the valedictory.

The first session was on newer aspects in AUB. The chairpersons were Dr. Vanita Raut and Dr. Pundalik Sonawane. There were four comprehensive talks in the session. Dr. Nagendra Sardeshpande spoke on Ormeloxifine, Dr. Geeta Balsarkar spoke on Progesterone regimes, Dr. Shailesh Kore on the role of intravenous iron and Dr B. Ramesh spoke on hysteroscopy in AUB.

The inauguration ceremony began with Dr. Rishma Pai (President MOGS), addressing the delegates. She said that for the first time in the history of MOGS, free papers were conducted on a digital platform. She also announced that MOGS has received the prestigious 'Covid Essential Heroes Award' during the CSR health impact awards function for the 'V Care and Share' programme. She mentioned that '8 Pearls of Wisdom', 'MOGS Matters', 'MOGS Media', Dr N.A. Purandare programs and 3- mega conferences have been held so far.

Dr. Anahita Chauhan (Secretary MOGS) then introduced the Chief Guest, Shri Anup Jalota, a well-known Indian singer, musician and actor, best known for his performances in Hindu devotional music. Shri Anup Jalota addressed the delegates and sang two beautiful devotional songs.

Dr. Rajendra Sankpal (Treasurer MOGS) thanked the national, international faculties and the chief guest. Dr. Gaurav Desai felicitated and thanked our Pharma Academic Partners.

The second session focused on Adenomyoma. Dr Shriram Gopal chaired this session. Dr. Ramani Devi spoke on role of dienogest and progesterone IUD, Dr. Rajendra Sankpal spoke on adenomyoma resection, Dr. Kuldeep Jain on improving fertility and we had an excellent pre-recorded lecture on non- surgical ablative therapy of adenomyosis by international stalwarts, Dr. Rudy Leon and Dr. Hugo C from Germany.

Following this was a panel discussion on 'Her unspoken problems' which was brilliantly moderated by Dr. Suvarna Khadilkar and Dr. Sanket Pisat. Panelists were Dr. J. B Sharma, Dr. Niraj Jadhav, Dr. Ashwini Bhalerao, Dr. Reena Wani, Dr. Priya Vora and Dr. Gaurav Desai.The panel was very interactive and various cases were discussed.

The last session was focused on fibroids. The chairpersons were Dr. Rishma Pai and Dr. Rajkumar Shah. Dr. Andrew Brill (USA) spoke on Laparoscopic Myomectomy (concept, necessity and complications) and Dr. Charles Koh (USA) spoke on suturing in Myomectomy (single or multiple layer). Following this, there was a Q & A round in which all the international faculties participated and answered many questions which were asked by the delegates. This was moderated by the chairpersons and Dr. Rajendra Sankpal.

Everyone enjoyed the academic and masti quiz held in between the sessions by Dr. Kunal Doshi and Dr. Garima Sharma. The winners of which were Dr. Avantika Parab and Dr. Rajiv Srivastav. In keeping with the MOGS mantra of the year FIT IS IT, a short video by Dr. Madhuri Mehendale was played and well appreciated. The programme ended with vote of thanks and distribution of prizes for the free papers and MOGS masti.

The office bearer in charge was Dr. Rajendra Sankpal. The convenors for the programme were Dr. Reena Wani and Dr. Nagendra Sardeshpande and co - convenors were Dr. Sanket Pisat, Dr. Priya Vora and Dr. Gaurav Desai.

The total number of delegates were 1318.


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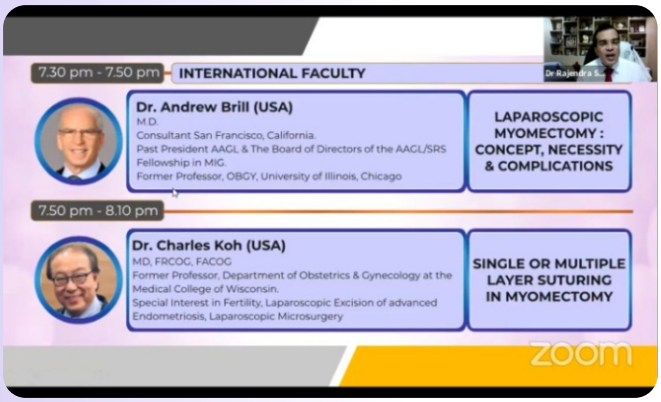
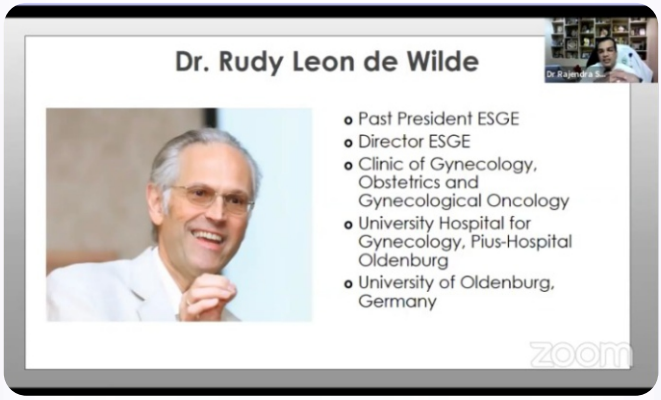
Priya Thakur
Anahita Chauhan
Anup Jalota
zoom


zoom


On Onference
NANDINI RAM...
Priya thakur
PRACHETA DESAI


7.30 pm - 7.50 pm
INTERNATIONAL FACULTY
Dr. Andrew Brill (USA)
M.D.
Consultant San Francisco, California.
Past President AAGL & The Board of Directors of the AAGL/SRS
Fellowship in MIG.
Former Professor, OBGY, University of Illinois, Chicago
LAPAROSCOPIC MYOMECTOMY : CONCEPT, NECESSITY & COMPLICATIONS
7.50 pm - 8.10 pm
Dr. Charles Koh (USA)
MD, FRCOG, FACOG
Former Professor, Department of Obstetrics & Gynecology at the Medical College of Wisconsin.
Special Interest in Fertility, Laparoscopic Excision of advanced Endometriosis, Laparoscopic Microsurgery
SINGLE OR MULTIPLE LAYER SUTURING IN MYOMECTOMY
zoom


6.15 pm - 6.35 pm
INTERNATIONAL FACULTY
Dr. Rudy Leon De Wilde (Germany)
Prof & Past President ESGE, Director ESGE
Clinic of Gynecology, Obstetrics and Gynecological Oncology
University Hospital for Gynecology, Pius-Hospital Oldenburg
University of Oldenburg, Germany
Dr. Hugo C Verhoeven (Germany)
Prof & Medical Director at the Private Center for Endocrinology, Preventive and Reproductive Medicine, Gynecology, Dusseldorf, Germany
NON - SURGICAL ABLATIVE THERAPY OF ADENOMYOSIS
zoom


Dr. Rudy Leon de Wilde
Past President ESGE
Director ESGE
Clinic of Gynecology, Obstetrics and Gynecological Oncology
University Hospital for Gynecology, Pius-Hospital Oldenburg
University of Oldenburg, Germany
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MOGS Teachers Day Program

Saturday, 5th September 2020

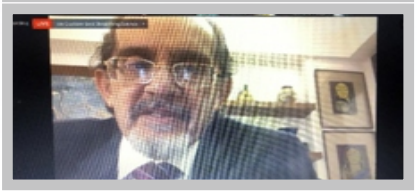
Conveners: *Dr Rajendra Nagarkatti & Dr Komal Chavan*

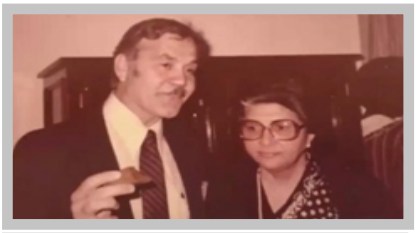
MOGS online Teachers Day Program was held on 5 th September 2020 from 6:30 pm onwards.

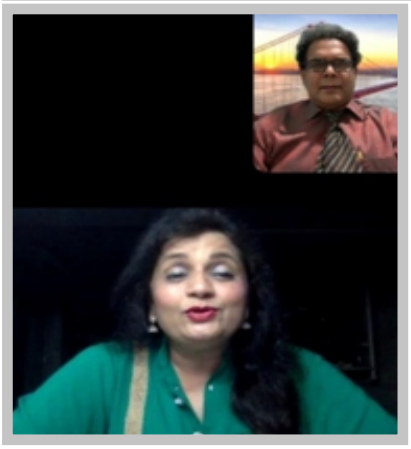
Program started with an informative talk on Optimising Results in IUI by Guest speaker Dr Sunita Tandulwadkar, which was chaired by Dr Niranjan Chavan, V P MOGS & Dr Suvarna Khadilkar, Jt Secretary.

Dr Rishma Pai delivered her Presidential address & later Dr Sarita Bhalerao, V. P. MOGS welcomed our trustees. Esteemed trustees Dr Adi Dastur sir, Dr Shyam Desai Sir & Dr C N Purandare sir blessed us by their Pearls of wisdom , Guru Gyan & Aashirwad. It was mesmerising to hear life experiences from the stalwarts on the occasion of teacher's day.

Senior teachers namely Dr Sadhana Desai , Dr Manik Potwar, Dr Madhuri Patel , Dr Kaizad Damania & Dr Anahita Chauhan, who have dedicated 3- 4 decades in imparting students with the wealth of wisdom, skills, & knowledge were felicitated by office bearers of MOGS and Conveners with Shawl, Sreephal (coconut) & Memento which was physically handed over to them by Sun Inca team on the same day. Dr Supriya Arwari , MOC conducted the felicitation in her excellent shero- shayari way





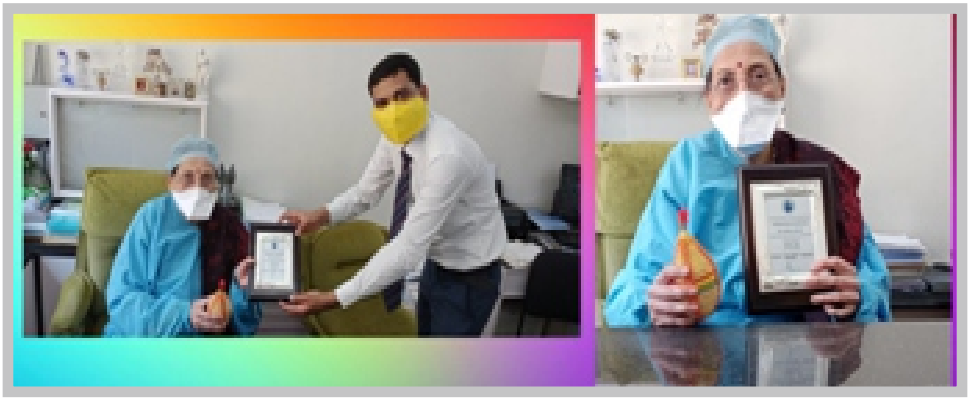


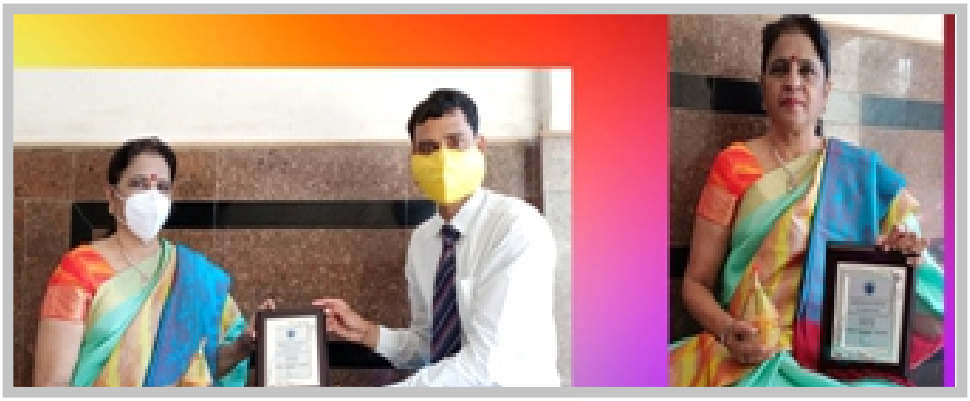
Videos compiled by Dr Niranjan Chavan and Dr Shrutika Thakkar were played as tribute to , all the trustees of MOGS and teachers who were felicitated. Guru Vandana by Dr Pooja Bandekar was very melodious.

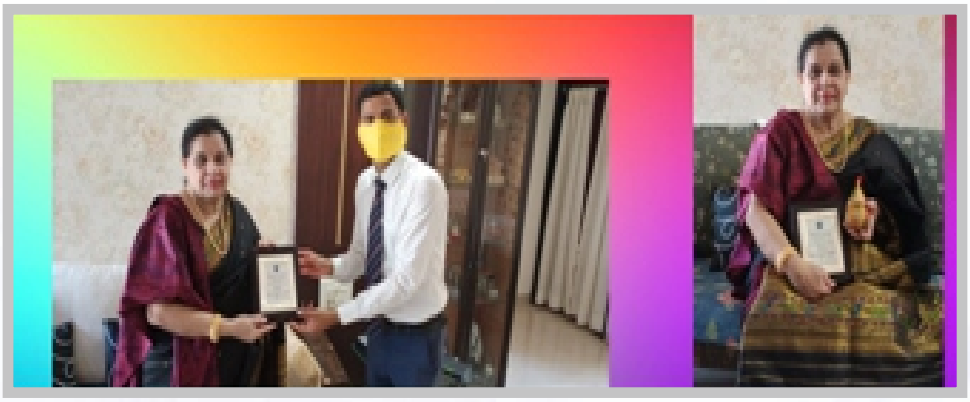
For Entertainment we had 3 Masti Question with prizes coordinated by Dr Garima Sharma, stand up comedy by Dr Sameer Sheikh & awesome dance videos made by our young brigade & MOCs Dr Shrutika, Dr Unnati Mamtora, Dr Navneet Desai dedicated to the teachers. Dr Navneet Desai & Mira Bhayendar team did 2 lovely song and dance performance.26 youth Council members joined together to make a lovely video. Program concluded with vote of thanks by Dr Unnati Mamtora.

It was the most memorable web program with blend of academics gratitude & fun. Program was supported by Education Grant by Sun Inca & Virtual partner were team Onference.

Conveners thanked Dr Rishma Pai President MOGS & Dr Anahita Chauhan Secretary MOGS , Dr Rajendra Sankpal Treasurer MOGS & the managing committee for the opportunity.







MOGS Outreach Webinar

Friday, September 25, 2020

Convenor : *Dr Sujata Dalvi & Dr Ameya Purandare*

MOC Dr Nidhi Gandhi welcomed everyone and then introduced the Chairpersons – Dr Anagha Lalliwala and Dr Yeshwanti Mody. Dr Mohit Saraogi spoke on “Safe Fertility Practice in Covid Era”. Dr Neelam Bhise showed beautiful video on how to remain fit and included talk by Dr Preash Ved, Diabetologist on food tips and effect of starvation.

Convenor Dr Sujata Dalvi welcomed MOGS President Dr Rishma Dhillon Pai and requested her to address the delegates. She gave very inspiring speech and elaborated on the various activities done by MOGS under her leadership. Co convenor Dr Ameya Purandare welcomed MOGS Secretary Dr Anahita Chauhan and she also gave her words of wisdom.

Next session started with Introduction of Chairpersons Dr Aspi Raimalwalla, Dr Rahul Salunke and Dr Sangeeta Agarwal. Dr Rajendra Nagarkatti elaborated Role of Calcium and Vit D in pregnancy.

This was followed by very neat and elaborate talk on Role of Micro-nutrients in Male and Female Infertility with video demonstration by the Guest speaker Dr Sudhir Jindal – Fertility specialist from Meerut UP. Dr Sanket Pisat gave lucid presentation on “Fertility enhancing Hysteroscopic Surgery”.

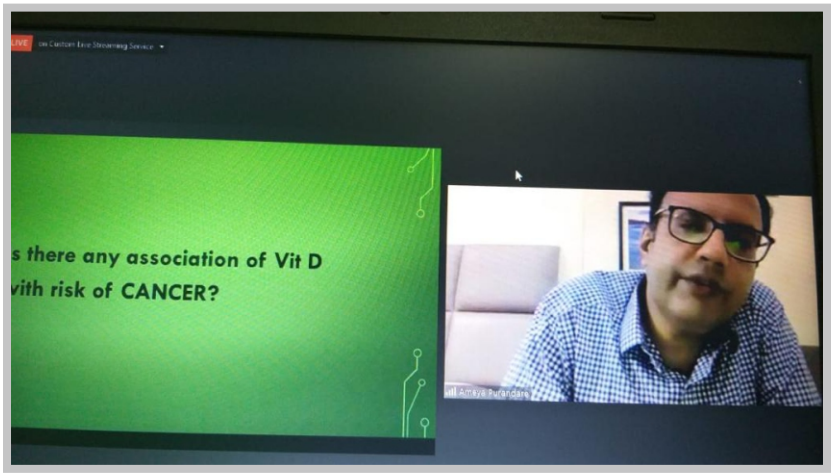
MOGS Masti questions were put up by Dr Neelam Bhise – two related to Fit is It and two non ObGyn (General) and contact number where answers were to be send was announced.

Next session on Panel Discussion started with Introduction of Moderators Dr Sujata Dalvi and Dr Ameya Purandare. Panel on "Role of Vit D in women" was discussed with panelists Dr Sarita Bhalerao, Dr Priti Vyas, Dr Madhuri Mehendale, Dr Rohan Palshetkar, Geriatric Physician Dr Preeti Chhabria, Endocrinologist Dr Renu Chauhan and Orthopedic Surgeon Dr Ram Prabhoo. Panel was very interactive and informative.

Prize Winners names for MOGS Masti were announced. They were Dr Smriti Saxena and Dr Dhaval Belvi for Fit is It, and Dr Madhuri Mehendale and Dr Sunanda Rani (Vishakhapatnam) for non ObGyn – General category.

This was followed by Vote of Thanks by Mr Krishna Reddy – AGM Torrent Pharma.
Total attendance – 222.

We would like to thank Mogs President Dr Rishma Dhillon Pai and Mogs Secretary Dr Anahita Chauhan for giving us permission to hold this Outreach Webinar and Mr Maruti Hundre – Brand Manager and Mr Rakesh Mehta – GM of Torrent Pharma for being educational partner for the same.



International Endoscopy E-connect conference

Wednesday, 30th Sept 2020

Convener : *Dr Niranjan Chavan*
Co-ordinators: *Dr Rajendra Nagarkatti, Dr Madhuri Mehendale, Dr Mansi Medhekar*

MOGS and Global Hysteroscopy summit organised an International Endoscopy E connect Conference on 30th Sept 2020 6-9pm.

Conference started with the Convener Dr Niranjan Chavan welcoming all the faculty and delegates. He then invited Dr Rishma Dhillon Pai to say a few words of wisdom. Dr Rajendra Nagarkatti, Dr Madhuri Mehendale and Dr Mansi Medhekar then invited the esteemed Chief guest Dr Hrishikesh Pai and Dr Nandita Palshetkar. Both our Guest of Honour congratulated the Convener and the coordinators for organising the program and shared their ideas and views about endoscopy.

The first session was a talk on 'Embryo hysterscopy' by Dr Sergio Haimovich from Spain. He mesmerised the audience with his wonderful work and amazing videos of intrauterine embryos seen on hysteroscopy. This session was chaired by Dr P.K.Shah, Dr Anahita Chauhan and Dr Sudha Tandon.

The second session was a comprehensive and elaborate talk on “Stretching the limits of gynaec endoscopy- Focusing on bowel and bladder resection” by none other than Dr Shailesh Puntambekar. The session chairperson's Dr Rajendra Saraogi, Dr Ganpat Sawant and Dr Ameya Purandare addressed the queries from the audience and applauded the speaker.

The third session was an interesting case video discussion superbly moderated by Dr Niranjan Chavan and Dr Rajendra Sankpal. Our esteemed panelist who comprised of the cream of endoscopic surgeons presented interesting videos on cases and techniques in endoscopy. Videos were presented by Dr Nagendra Sardeshpande, Dr Sanket Pisat, Dr Kiran Coelho, Dr Rohan Palshetkar, Dr Nitin Shah, Dr Anurag Bhate, Dr Gaurav Desai, Dr Hemant Kanojia, Dr Soumil Trivedi, Dr Ashwini Kalayankar. Many encouraging messages were received in appreciation of these videos from the audience.

MOGS MASTI questions were presented by Dr Bhavini Shah and Dr Bhumika Kotecha Munde. Dr Mansi Medhekar announced the prize winners at the end of the program. The winners were Dr Pratik Tambe and Dr Vrinda Loyalka.

In line with our theme for MOGS 'Fit is It' Dr Aditi Tandon and Dr Amrita Tandon gave the audience some interesting exercise tips.

Vote of thanks was expressed by Dr Madhuri Mehendale.

MoC for the program were Dr Pradnya Changede, Dr Riddhi Desai and Dr Pranay Desai.

A special thanks to Sun Intas and Onference team for their valuable contribution.
Total Registration were 1233.

We Thank President Dr Rishma Pai, Secretary Dr Anahita Chauhan and Treasurer Dr Rajendra Sankpal for this opportunity.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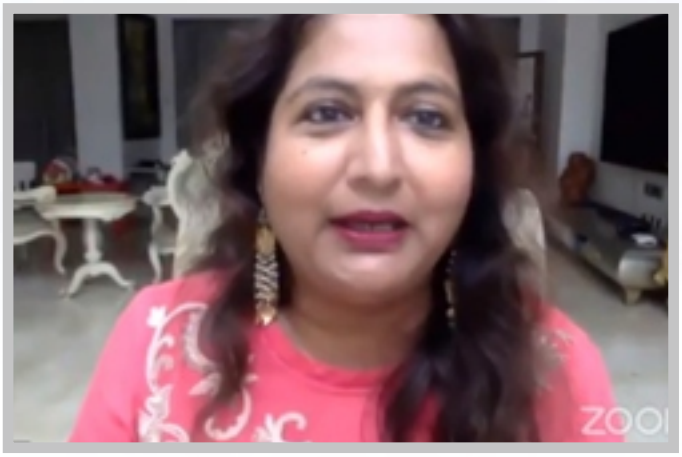
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MOGS Dr N A Purandare Teaching Program

Saturday October 03, 2020 by Nowrosjee Wadia Hospital, Parel, Mumbai

Convener : *Dr Sarita Bhalerao, Dr Geetha Balsarkar and Dr Sujata Dalvi*

The program started with Registration

MOC Dr Vernica Sah / Dr Sunil Tambvekar welcomed everyone.

Welcome Inaugural address was started by Dr Sujata Dalvi who gave details of Dr N A Purandare webinar and introduced Dr Minnie Bodhanwala – CEO of Wadia Hospital. This was followed by introduction of Dr M J Jassawalla – Dean – N Wadia Hospital by Dr Kaizad Damania. Both expressed their inability to join the Inauguration due to emergency meeting. This was followed by digital lighting of the lamp.

VP - President Elect MOGS Dr Sarita Bhalerao introduced MOGS President Dr Rishma Pai and the message – address by President Dr Rishma Pai was played on video. Dr Geetha Balsarkar – Clinical Joint Secretary MOGS introduced MOGS Secretary Dr Anahita Chauhan. She gave encouraging words of wisdom regarding the program.

The first talk session was chaired by Dr Ameya Purandare / Dr Anagha Chatrapati. Dr Hrishikesh Pai – FOGSI President Elect – spoke elaborately on "Pre-Genetic Diagnosis - Test"and imparted knowledge and cleared doubts. This was followed by Dr Vishal Gupta – MICU In Charge, KEM Hospital who talked about"Obstetric Consumptive Coagulopathy - DIC".

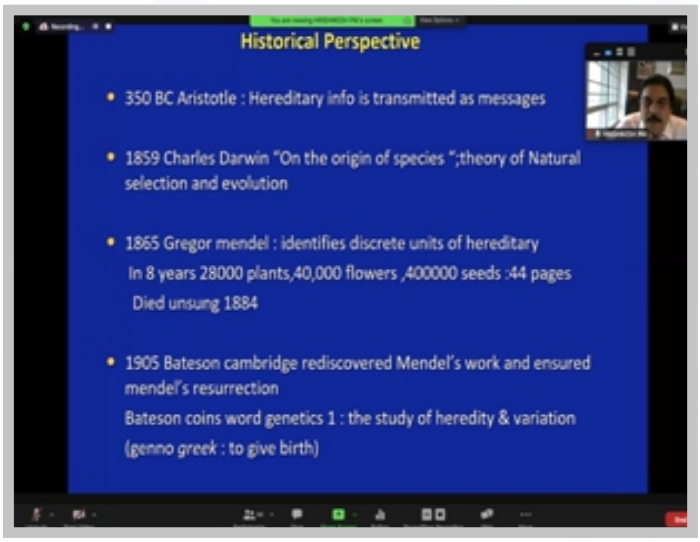
First Case presentation on "RPL – First trimester" was done by Dr Hrucha Shingnapuria from Wadia Hospital. The examiners were Dr Vandana Bansal / Dr Pooja Bandekar / Dr Rachna Dalmia.
The second session was chaired by Dr Deepali Kale and Dr Ketaki Kulkarni. This session was OSCE – Objective Structured Clinical Examination. This was being conducted for the First time in MOGS Dr N A Purandare program for DNB students. This was meticulously conducted by Dr Sarita Bhalerao and Dr Madhuri Patel – Joint Secretary FOGSI. Dr Navin Srinivasan – KEM Hospital and Dr Namrah – Saifee Hospital answered the OSCE very well. The OSCE was on Puberty Menorrhagia, HDP, Delivery of Second of the Twins, Fetal Monitoring in Labor, PID, Thalassemia Trait, Pregnancy counselling, POP, Cervical Cancer Screening, PPH and COCs.

Second Case presentation on "Carcinoma of Uterine Endometrium"was done Dr Priyanka Sureddi from Wadia Hospital. The examiners were Dr Geetha Balsarkar / Dr Sujata Dalvi / Dr Trupti Nadkarni

This was followed by "Examination Tips" by Dr M J Jassawalla.
The whole program was very interactive and concluded with Vote of Thanks by Dr Sunil Tambvekar.

Total attendance was 223. 1 MMC Credit Point Granted

We would like to thank N Wadia Hospital administration and MOGS President Dr Rishma Pai / Hon Secretary Dr Anahita Chauhan for giving us the opportunity to conduct this program for PG students. Sincere thanks to Digital Onference team for conducting this webinar very smoothly.


Historical Perspective
350 BC Aristotle : Hereditary info is transmitted as messages
1859 Charles Darwin "On the origin of species ";theory of Natural selection and evolution
1865 Gregor mendel : identifies discrete units of hereditary
In 8 years 28000 plants,40,000 flowers ,400000 seeds :44 pages
Died unsung 1884
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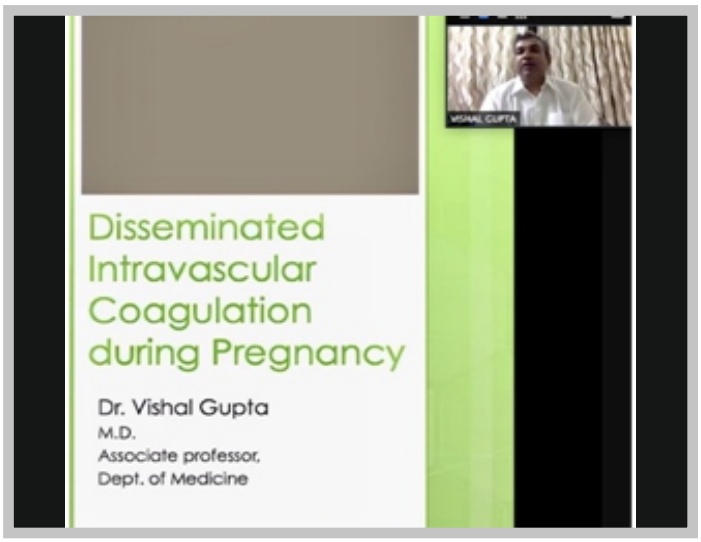
Bateson coins word genetics 1 : the study of heredity & variation
(genno greek : to give birth)


Disseminated Intravascular Coagulation during Pregnancy
Dr. Vishal Gupta
M.D.
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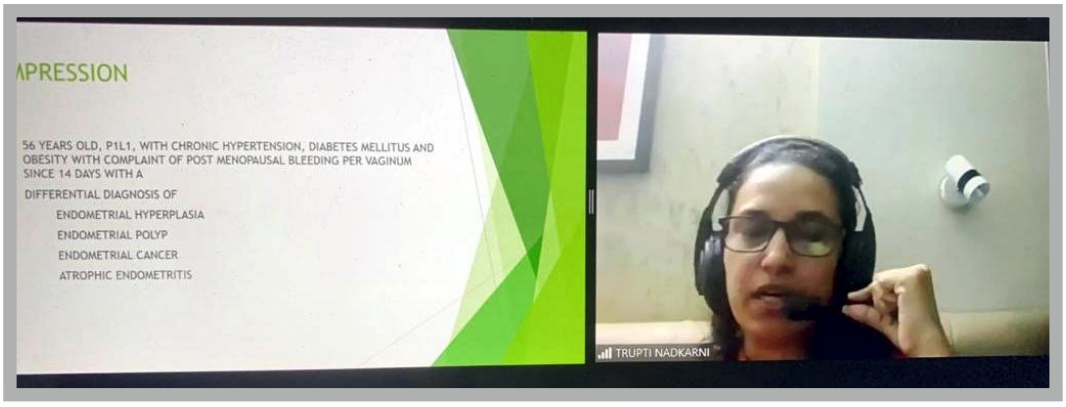
Dept. of Medicine


APRESSION
56 YEARS OLD, P1L1, WITH CHRONIC HYPERTENSION, DIABETES MELLITUS AND OBESITY WITH COMPLAINT OF POST MENOPAUSAL BLEEDING PER VAGINUM SINCE 14 DAYS WITH A
DIFFERENTIAL DIAGNOSIS OF
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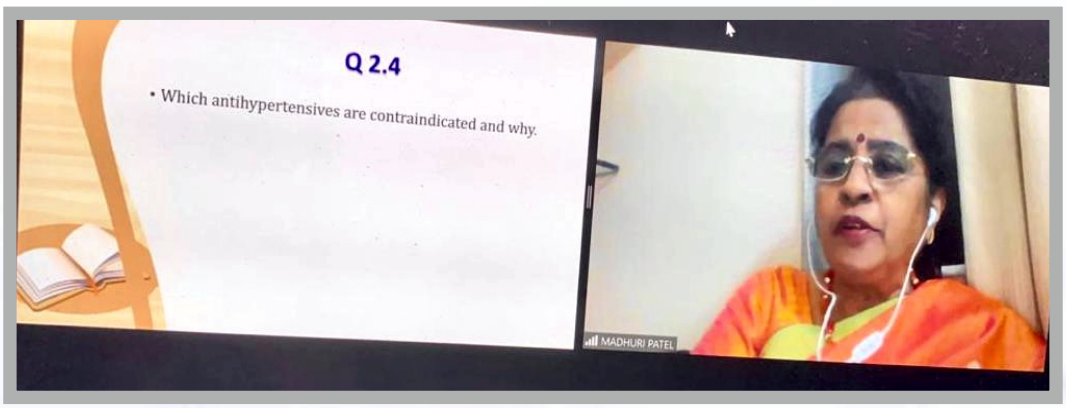
Q 2.4
• Which antihypertensives are contraindicated and why.
MADHURI PATEL

Combined Oral Hormonal Contraception Evolution and Clinical Update

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"'To improve is to change; to be perfect is to change often" *Winston Churchill*

In 1999 the Economist in its Millennium issue called the oral contraceptive pill the Liberator and named it the most important scientific advance of the 20th century (The Economist, 1999).

Acknowledging the influence of the oral contraceptive pill over half a century, Gibb wrote, 'There's no such thing as the Car or the Shoe or the Laundry Soap. But everyone knows the Pill whose approval 50 years ago rearranged the furniture of human relations in ways that we've argued about ever since (Gibb, 2010).

The introduction of birth control pills in the 1960s dramatically influenced the lives of women and the gender dynamics in society. The pill empowered women to make choices and exert control over when, or if they wanted, to have children. Over the last six decades, these pills have evolved through many avatars into a safer, lower dose and convenient forms with a plethora of non-contraceptive benefits.

Combined oral hormonal pills (COCs) are safe and suitable for nearly all women and at ages ranging from adolescence to the perimenopause. The contraindications to the pill are limited and include women up to 6 months postpartum who are lactating, elderly smokers, women with uncontrolled hypertension, diabetes for more than 20 years with end organ damage, gall bladder disease, ischemic heart disease, breast cancer, migraine with aura and those undergoing major surgery with prolonged postoperative immobilization. The adverse effects include headaches, breakthrough bleeding, bloating and swelling, nausea, breast tenderness, fluid retention, chloasma and mood changes, most of these being associated with the older generations of pills with high doses of estrogen. Most of these side effects wear off with continuous usage and there is generally no need to discontinue the pills (Sheriar and Gandhi, 2013).

The Estrogen Component

The Ubiquitous Ethinyl Estradiol

The combined contraceptive pills are a combination of estrogen and a progestin. The estrogen component till recently, is universally ethinyl estradiol (EE) whose dose has decreased from 50 mcg to 30-35 mcg and now down to 20 mcg in the ultra-low dose pills. The primary effect as also the main contraindications to the pill are related to the estrogen component.

The variable component is the progestin compound which adds versatility to the pill and has added facets and extended oral hormonal contraception into new indications. The pharmacological options and dosage combinations of these formulations now offer the possibility of tailor made choices for contraception along with the treatment of variety of other conditions.

The Natural Estradiol

The first major change in the estrogen content happened with the introduction of Zoely E2 in 2011. It had the endogenous 17 beta estradiol (E2) with nomegesterol acetate (NOMAC). These were 24 pills monophasic E2 1.5 mg and NOMAC 2.5 mg pills with 4 placebo pills. The combination was reported to have less influence on hemostasis, fibrinolysis, lipids and carbohydrate metabolism than EE 20/30 mcg and levonorgestrel (LNG) 100/150 mcg pills with bleeding that was shorter and lighter than EE 30 mcg and drosperinone (DSP) 3 mg pills. Natural estrogens have the advantage of being metabolized faster, have lower bio availability and less impact on hepatic function (Christin-Maitre et al, 2013)

The Progestin Component

Second Generation Progestins

Levonorgestrel (LNG) is more potent than first generation progestins. It is chemically derived from testosterone and has low degree of androgenic activity. Being highly effective for contraceptive purposes and for cycle regulation, second generation progestins continue to be used for cycle control and dysfunctional uterine bleeding. They have a higher safety margin in women at risk of venous thromboembolism (VTE).

Third Generation Progestins

Desogestrel (DSG) is more selective than levonorgestrel. It has high progestational and low androgenic activity. Third generation progestins are ideal for cycle control and dysfunctional uterine bleeding with a more favorable metabolic profile and a higher safety margin in women with risk of arterial disease.

Fourth Generation Progestins

Drospirenone (DSP) is structurally related to spironolactone and exhibits progestogenic, anti-mineralocorticoid and anti-androgenic activity. Due to diuretic action, it aids weight loss especially due to water retention and thus relieves the progestin side effects. Fourth generation progestins are favored for the least disruption they cause. They have a specific role and approval for the treatment of premenstrual dysphoric disorder (PMDD) and a favorable antiandrogenic profile.

Antiandrogenic Progestins

Cyproterone acetate (CPA) is a progesterone derivative that acts as an androgen receptor antagonist with progestin and glucorticoid action. Due to its antiandrogenic effects, it gives best cosmetic benefits and is the drug of choice for PCOS patients with hyperandrogenism and androgenic side effects like acne and hirsutism. These pills tend to have higher risk of thromboembolism compared to women who do not take any pills and marginally higher risk than the contraceptive pill containing levonorgestrel.

Ethinylestradiol and Dienogest

Dienogest (DNG)is a 19 nortestosterone derivative with antiandrogenic properties having beneficial effect on hair and skin. It has a potential role to play in endometriosis. Dienogest 2mg along with 30mcg of ethinyl estradiol was first launched in Germany in 1995 and was found to have reliable ovulation inhibitor with high contraceptive efficacy and effective cycle control. It reduces the intensity and duration of bleeding with improvement in symptoms of dysmenorrhea. It has beneficial effects on hair, skin and acne vulgaris and a potential role in the medical treatment of endometriosis (Pérez-Campos, 2010).

The rationale for choosing the progestin component is based on the pharmacologic actions and potency of the different progestational agents as shown in Table 1.

Table 1. Types of progestins by pharmacological action and activity

Hormone	Progestogenic Antiestrogenic Activity	Glucocorticoid Activity	Androgenic Activity	Anti androgenic Activity	Anti Mineral -ocorticoid Activity
Progesterone	+	--	--	(+)	+
Desogestrel	++	--	+	--	--
Norgestimate	+/++	--	+	--	--
Gestodene	++	--	+	--	(+)
Levonorgestrel	++	--	+	--	--
Drosperinone	+	--	--	+	+
Cyproterone Acetate	+	(+)	--	++	--
Dienogest	+	--	--	+	--

++ strong effect, + distinct effect, (+) negligible effect, -- no effect

Evolution in Dosage Schedules

Traditional Schedule

The traditional dosing schedule for combined contraceptive pills has 21 active pills with20-50 mcg EE and a fixed dose of progestin. It has 7 pill free days. With the lowering dose of estrogen content to 20 mcg EE, new dosing schedule of 24 active pills with 20mcg EE and DSP 3mg with 4 pill free days often with placebo pills.

The 21 day regimen has its roots in the history of the pill. Pincus one of the innovators of hormonal contraception acknowledged in 1958, that a cycle of any desired length could presumably have been produced. But he and Rock decided to cut the hormones off after three weeks and trigger a menstrual period because they believed that women would find the continuation of their monthly bleeding reassuring. (Gladwell, 2000)

Extended Schedule

In 2002, US FDA approved the product called Seasonal, containing EE 30 mcg and LNG 150 mcg of levonorgestrel (Seasonal) to be taken for 84 days continuously followed by pill free interval or a placebo for 1 week. The 84 day regimen can be administered by using 4 standard 21 day pill cycles back to back. It gives patients extended periods of amenorrhoea for 3 months with reduced hormone withdrawal symptoms. Menstrual bleeding episodes are reduced from 12-13 to 4-6 each year. The endometrium becomes thin and atrophic. There was improved compliance, maintenance of activities, less time away from work and improvement in premenstrual symptoms and dysmenorrhea (Nelson, 2010).

Continuous Schedule

Continuous regimens were introduced with 84 active pills containing EE 30mcg and LNG 150mcg. This is followed by 7 active pills of EE 10 mcg(Seasonique). A ultra low dose version of the same has 84 active pills containing EE 20mcg and LNG 100mcg followed by 7 active pills with EE 10mcg (LoSeasonique). The week of low dose estrogen instead of pill free period or a placebo diminished unplanned bleeding to less than 1 day a month with fewer symptoms of cramping, bloating and headaches (Andersen et al, 2006).

Lybrel is a 365 day combination dosing available in the US that contains EE 20 mcg and LNG 90 mcg. Such continuous use of a COC with no hormone free interval can also be is initiated with any low dose monophasic pill with similar composition (Archer et al, 2006).

Schedule Mimicking Nature

Recognising the changes in ovarian hormones at the different phases of the ovarian cycle the quadriphasic pill was designed to reflect these changes in an effort to mirror natural cycles. The quadriphasic pills Natazia and Qliara have estradiol valerate (EV) which is the synthetic prodrug of 17 beta E2 and dienogest. The doses over 28 days are staggered as EV 3 mg for 3 days, EV 2 mg and DNG 2 mg for 5 days, EV 2 mg and DNG 3 mg for 17 days and EV 1 mg for 3 days (Stewert and Black, 2015).

Quick Start of Combined Oral Hormonal Contraception

The start of a new cycle in the conventional regimen in menstruating women was deferred to early in the subsequent cycle. This approach had issues with compliance and associated failures. To address this deficiency that the quick start regimen was proposed. With this the oral contraceptive pills are started at the first visit whenever in the cycle.

The effectiveness, continuation and acceptability of both conventional and immediate start combined oral contraception are reported to be comparable. This reduces unintended pregnancies while having similar bleeding patterns and side effects (West off et al, 2002).

Circumstances in which combined oral contraceptive pills can be started and the need for additional contraception is shown in Table 2.

Table 2. Timing of start of combined oral hormonal contraception by circumstance and need for additional protection

Circumstances	**When to start COC Cycle**	**Additional Contraceptive Protection**
Women having menstrual cycles	Up to and including day 5 Quick start any time if reasonably certain she is not pregnant	No Yes for 7 days
Women who are amenorrhic	At any time if reasonably certain she is not pregnant	Yes for 7 days
Postpartum women not breastfeeding	On day 21 if no risk for VTE After day 21 Menstrual cycles returned start as for women having menstrual cycles Menstrual cycles not returned start as in amenorrhic	No No if starting by day 5 Yes for 7 days

Post first or second trimester abortion	Up to day 5 post abortion At any other time if it is reasonably certain she is not pregnant	No Yes for 7 days

Combined Oral Hormonal Contraception beyond Contraception

Management of Heavy Menstrual Bleeding

The efficacy of COCs in treatment of heavy menstrual bleeding (HMB) is well accepted. A Cochrane Systematic Review reported moderate quality evidence suggests that the COC pill over 6 months reduced bleeding in women with unacceptable HMB from 12% to 77%. (Letha by et al, 2019).

Treatment of Dysmenorrhea

By inducing anovulation, COCs have been shown to be effective and safe for the treatment of primary dysmenorrhea. A Cochrane Systematic Review found pain improvement with COCs as compared to placebo, with greater benefit seen with third generation than second generation COCs (Wong et al, 2009).

Treatment of Endometriosis Associated Pain

COCs are reported to be effective, safe and cost effective in the treatment of pain in laparoscopically proven endometriosis. A Cochrane Systematic Review reported a reduction in self-reported dysmenorrhoea was noted in patients with COC as compared to patients on placebo (Brown et al, 2018).

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Treatment of Hirsutism

Low dose COCs with antiandrogenic progestin are the initial pharmacological therapy in premenopausal patients with hirsutism despite cosmetic measures as per the guidelines of Endocrine Society of Clinical Practice. The androgen levels with abnormal hirsutism score are tested before initiation of treatment. If the clinical response is suboptimal treatment with antiandrogen therapy using spironolactone, finasteride, cyproterone or flutamide is started after six months of COCs.. There are recommendations against antiandrogen monotherapy unless adequate contraception is used suggesting an important role for concomitant COCs (Martin et al, 2018).

Management of Premenstrual Dysphoric Disorder

COCs with drospirenone have been approved by the US FDA to treat PMDD. A Cochrane Systematic Review had less severe symptoms after 3 months of EE 20 mcg and DSP 3 mg treatment (Lopez et al, 2012)

Beneficial Effect on Ovarian Tumors

COCs are found to effect a modest and long lasting reduced risk of benign ovarian tumors with both current and past users. Of these endometriom as having the greatest reduced risk. COCs also provide a risk reduction in ovarian cancer of up to 40–50% greater with more than 24 months use. Protection against benign ovarian tumors may hence be an additional non-contraceptive benefit of COC use (Westhoff et al, 2000).

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Perimenopause Hormone Replacement

COCs are a safe and effective alternative to conventional hormone replacement therapy (HRT) in healthy, non-smoking perimenopausal women. Besides the contraceptive protection, COCs protect against endometrial and ovarian cancers, benefit bone mass density, relieve hot flushes and treat menstrual disturbances. The use of COCs is recommended till the age of 50 years after which there is a switch to alternative methods of contraception and HRT (Bitzer, 2019).

Conclusion

The oral contraceptive pill has the distinction of being the medication taken by the largest number of healthy humans in the history of mankind. While a pharmaceutical product, its use for women, is both a matter of choice and empowerment. In just six decades the pill has evolved through many avatars and we now have a range of options for composition, doses and indications. This variety has now made it possible to tailor its contraceptive and non-contraceptive use for each individual woman.

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Long Acting Reversible Contraception (LARC)

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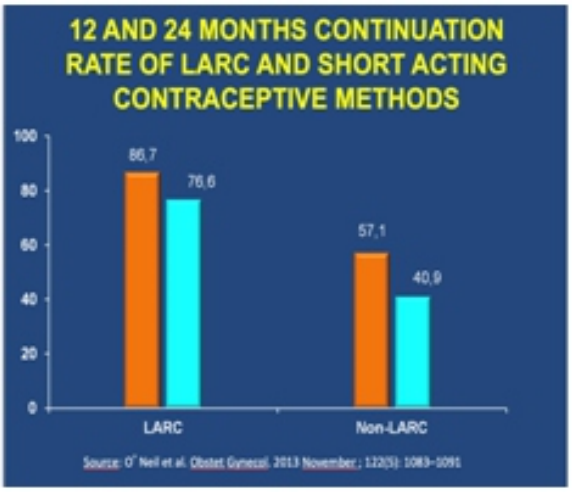
"Most accidents are caused by humans, and most humans are caused by accidents."

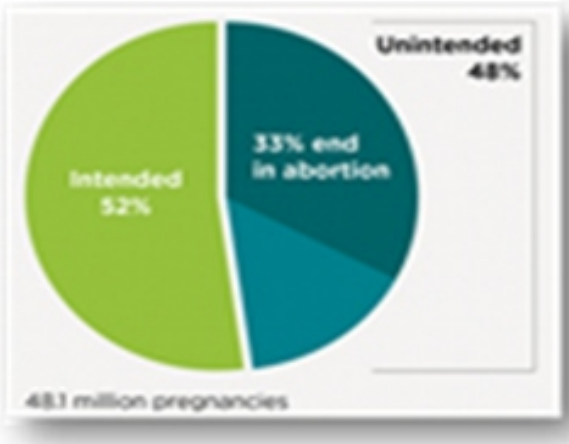
New scientific and medical development in reproductive health have emerged in past few years, also the control of a women's procreative potential has advanced considerably. Recent years have seen expansion in the type of contraception available to women which is safe and effective. The introduction of LARC (long acting reversible contraceptive) has provided the wherewithal of potential realisation -if not actual implementation of true population control everywhere. The devastating effects of population explosion are already to apparent in third world countries which have begun to benefit from the improved health care infrastructure along with industrialisation, but which have not been very successful in introducing and infusing population control measure.

DEMOGRAPHY

India is the second most populous country in the world with a population of 1.3 billion which contribute 17.74 % of the total population of the world. The estimated no of pregnancies are 48.1 million in India per year wherein abortion accounts total 1/3 of the total pregnancies. According to a 2019 survey done in India 70.1 pregnancies out of 1000 of reproductive age 15-49 are unintended, which leads to contribution of 8% of MMR due to unsafe abortion.[1]

Adolescent age group of 15-19 yeas is more exposed to unintended pregnancies and hence unsafe abortion and it's complications, 1/3 of high school students in US reported to be sexually active and only 1/3 uses effective method of contraception and 1/6 did not use any. With alarming statistics FIGO initiated a program on prevention of unsafe abortion which provides access to contraceptive information and service which will contribute to reduction of maternal morbidity and mortality associated with unsafe abortion.





LARC are broadly classified as :

- Non-hormonal copper intrauterine devices.
- Hormonal (progesterone only method) Intrauterine system
- Injectable
- Implants

All LARC methods are suitable for :

- Nulliparous women
- Women who are breast feeding
- Women who have had an abortion
- Women with BMI of >30
- Women with HIV (encourage safer sex, not Implanon if taking anti-retroviral drugs.)
- Women with diabetes
- Women with cardiovascular risk, epilepsy, migraine and who have contraindication for estrogen.

The actual efficacy during typical use of Long Acting Reversible Contraceptives (LARC) same as the theoretical efficacy during "perfect" use.

INTRAUTERINE CONTRACEPTIVE

Copper IUD – The copper IUD is a T-shaped device which contains 380 mm2 copper. It is approved by the US Food and Drug Administration (FDA) for 10 years of use. Levonorgestrel IUDs – The levonorgestrel IUDs are T-shaped devices that release levonorgestrel at rate of 10-20mcg per day. It is approved by the US Food and Drug Administration (FDA) for 5 years. The LNG-releasing IUDs are available in three different formulations which is approved by US FDA leasing IUDs are available in three different formulations which is approved by US FDA

- 52 mg LNG IUD with an initial release rate of 20 mcg/day, can be used for 5 years (Mirena)
- 19.5 mg LNG IUD with an initial release rate of 17.5 mcg/day, can be used for 5 years (Kyleena)
- 13.5 mg LNG IUD with an initial release rate of 14 mcg/ day, can be used for 3 years (Skyla)

All the above mentioned IUCDS have barium in the frame to make it detectable by radiograph. Multiple other IUD types and shapes have been used globally shown in the picture.

Mechanism of action

Multiple mechanisms appear to contribute to the contraceptive action of IUDs.

- Foreign body effect induced by the IUD frame induces a sterile inflammatory reaction, which is toxic to sperm and ova and impairs implantation.2
- The production of cytotoxic peptides and activation of enzymes lead to inhibition of sperm motility, reduced sperm capacitation and survival, and sperm phagocytosis.
- The addition of LNG provides further contraceptive benefits. Progestins thicken cervical mucus, which acts as a barrier to the upper genital tract
- Progesterone release also causes endometrial decidualization and glandular atrophy that impairs implantation.
- Medicated IUD's may inhibit the binding of the sperm and egg by increasing glycodelin A production.

Benefits:

- Highly effective
- Does not require regular adherence from user to maintain high effectiveness
- Long acting.
- Rapidly reversible-
- Copper IUD and LNG IUD both provide immediate return of fertility
- Private and does not interfere with the spontaneity of sex.
- Avoidance of exogenous estrogen (both IUD types) and hormones (copper IUD only)
- Reduced costs with long-term use.
- Reduced risk of cervical and ovarian cancer[3]

Copper IUD	
380mm2 Cu: Fitted at 40 or over:	5 - 10 years for 'ever'
LNG IUS	
Under 45: Fitted at 45 or over:	5 years for 'ever'

An advantage of the TCu380A IUD as compared with the LNG IUDs is that it can be used for emergency contraception (EC) when inserted within 5 day of unprotected intercourse. 4 When used as an EC method, the TCu380A has a <0.1 percent pregnancy rate. The device can then be left in place to provide ongoing contraception.

The non contraceptive benefits of progesterone IUDs which makes it suitable for adolescent and adult perimenopausal women includes,

- Reduction in menstrual flow and decreases anaemia,
- Decrease in pelvic pain from endometriosis, and dysmenorrhea,
- Reduces risk of PID
- DMPA protect against the risk of endometrial cancer and ovarian cancer.

Risk of expulsion

The incidence of expulsion is 3 to 10% for the TCu380 and 3 to 6% for the LNGIUD in the first year of use

IUCD and Infection

- IUD related bacterial infection is due to contamination of the endometrial cavity at the time of insertion
- Infections occurring 3-4 months after insertion are due to acquired STIs & not the direct result of IUD
- PID is extremely rare beyond the first 20 days of insertion.
- Doxycycline (200 mg)/Azithromycin (500mg) administered orally 1 hr prior to insertion – protective against insertion related infections.
- There is no need for removal of the IUD if the woman wishes to continue its use.

IUCD do not increase risk of ectopic pregnancy

Injectable Contraceptives.

Injectable contraceptive provides highly effective, three-month-long reversible contraception and it eliminates the need for daily user action, action near the time of sexual intercourse, and need for partner cooperation.

Progesterone only injectable

- Depot medroxyprogesterone acetate (DMPA, also known as DepoProvera) : 150mg/1 mL for intramuscular injection
  150mg/1 mL for intramuscular injection and 104 mg/0.65 mL for subcutaneous injection every 3 months
- Norethisterone –enanthate(NET EN)
  200mg NET EN intramuscular injection every 2 months

Combined injectable contraceptives.

- DMPA 25 mg plus estradiol cypionate 5 mg(cyclofem)
- NET EN 50 mg plus estradiol valerate 5 mg (mesigna)

Mechanism of action

- DMPA primarily acts by inhibition of follicular maturation and ovulation.[5]
- Progestins also works by making cervical mucus thicker and less permeable to sperm and affects tubal motility that are unfavourable to sperm migration, thus inhibiting fertilization,
- It also makes the endometrium thin and less suitable for implantation.

The injectable contraceptives is one of the most effective methods of temporary contraception in actual use and even better than OCs and some IUDs in this respect.
Timing of injections — The DMPA injection can be given at any time once pregnancy has reasonably been excluded and within five to seven days of onset of menses, post abortion, six weeks post-delivery.
Failure rate - 0.1-0.4% in 1st year.

IMPLANTS

The most commonly used implant is a single-rod progestin (etonogestrel) contraceptive placed subdermally in the inner upper arm for long-acting reversible contraception in women. It is USFDA approved for 3 years.[6]

The implant consists of a 40 mm by 2 mm semi –rigid plastic (ethylene vinyl acetate) rod containing 68 mg of the progestin etonogestrel (the 3-keto derivative of desogestrel). Etonogestrel is slowly released over least three years initially at 60 to 70 mcg/day, decreasing to 35 to 45 mcg/day at the end of the first year, to 30 to 40 mcg/day at the end of the second year, and then to 25 to 30 mcg/day at the end of the third year

Women at high risk of unintended pregnancy, including adolescent's women undergoing induced abortions are the ideal candidates for implant.

Mechanism of action

Mechanism of action is similar to other Progestin contraception that cause changes in cervical mucus and tubal motility which is unfavourable to sperm migration, thus inhibiting fertilization.

The Pearl Index of 0.38 pregnancies per 100 women-years of use, which is similar to that of other long-acting methods of contraception .[6]

Side effects

Local

- Implant site reactions were reported by nearly 9 percent of women. These reactions included erythema, hematoma , bruising , pain , and swelling.

Systemic

- Change in bleeding pattern – The most common side effect of the etonogestrel implant is unscheduled, or irregular, uterine bleeding, reported by approximately 11 percent of users; which may or may not decrease with continued use.6 In the analysis of 11 clinical trials unscheduled bleeding was the primary reason for discontinuation, with a rate of 14.8 percent in the United States and Europe, but only 3.7 percent in Southeast Asia, Chile, and Russia.[7] The number of unscheduled bleeding days was highest in the first three months of use, decreased during the first year of use, and then plateaued for the second and third years of use. Treatment of unscheduled bleeding is not necessary, but it is the principal cause of discontinuation. Several approaches to their treatment have been used, including short-term use of nonsteroidal anti-inflammatory drugs, combined oral contraceptive pills

- Bone –Despite creation of a relatively hypoestrogenic state the etonogestrel implant does not induce significant bone loss.

- Other – few other side effects of etonogestrel implant included headache , weight gain , acne , breast tenderness , emotional lability. A study comparing women receiving the etonogestrel implant, levonorgestrel implant, and copper IUD, mean weight gain at 36 months of use was 3 kg for both types of implants and 1 kg for the copper IUD

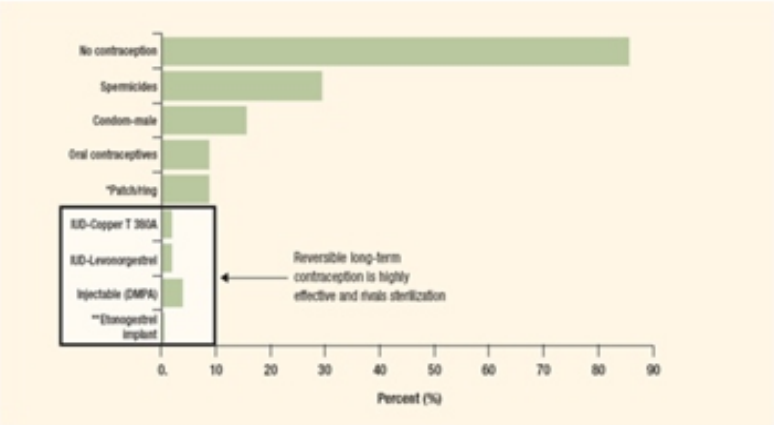
Noncontraceptive benefits

Similar to progesterons contaceptives, implants have an additional benefit of decrease in amount of blood flow during menses , it also help to reduce the pain during menses and is a good contraceptive for patients with history of endometrosis.

Studies have shown to increase in number of women using contraceptive implant increased from 0.3 to 0.8 percent between the time periods 2006 to 2010 and 2011 to 2013.[8]

Clinician who has been trained in the technique can insert the implant. It can be inserted at any time as long as the clinician is reasonably certain that the patient is not pregnant. The optimum site for insertion of implant is ventral aspect of arm or forearm subdermally.

Contraceptive efficacy	
Copper IUD	99.7%
LNG IUS	99.7%
Injectable	99.8%
Subdermal Implant	99.93%



Subdermal implants are very effective type of long acting contraceptives .
FOGSI endorses contraceptive implants as an efficient and reliable form of contraception.

Despite of having good contraceptive efficacy reasons for under use of LARC method

1. Women's misperceptions and misinformation about the methods.
2. Higher initial cost (although the cost is generally lower over time).
3. Provider dependence', such as the requirements for specific clinical skills and facilities
4. Provider bias against the method.

Contraceptive counselling should include discussion of IUDs and the contraceptive implant for adolescents and reproductive and perimenopausal age group as these methods are acceptable, cost effective, reversible after discontinuation and has fewer side effect

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CAPSULE

Raymond Pearl

(3 June 1879 – 17 November 1940)

Raymond Pearl was an American biologist, regarded as one of the founders of biogerontology. He spent most of his career at Johns Hopkins University in Baltimore. Pearl was a prolific writer of academic books, papers and articles, as well as a committed populariser and communicator of science. The Pearl index was introduced by Raymond Pearl in 1934. It has remained popular for over eighty years, in large part because of the simplicity of the calculation. The Pearl Index is used as a statistical estimation of the number of unintended pregnancies in 100 woman-years of exposure (e.g. 100 women over one year of use, or 10 women over 10 years). It is also sometimes used to compare birth control methods, a lower Pearl index representing a lower chance of getting unintentionally pregnant. At his death, 841 publications were listed against his name

Contraceptive Rings & Patches

(The new Future of Contraception in India)

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Variety of newer contraceptives are available and their usage is rising all over the world.
2 of the newer ones are
1. Contraceptive Vaginal Rings
2. Contraceptive Patch:

Vaginal Rings (V-Rings) are polymeric drug delivery devices designed to produce controlled release of drugs over extended period of time. Vaginal rings as contraception contains 2 hormones Estrogen and Progesterone, similar to those used in O-C pills.
a) **NUVA RING :** contains ethynylestradiol and etonogesterol.
b) **ANOVERA :** contains ethynylestradiol and Segesterone.
Usage : Inserted in Vagina for 3 weeks f/b 1 week ring-free period.
Vaginal Rings are easily inserted and removed. Vaginal walls hold them in place. Exact location is not critical for clinical efficiency. Rings are commonly placed next to the cervix. Deeper the ring less it is felt. Rings are typically left in place during Intercourse and most couples are comfortable.
Rings can be removed before Intercourse. If ring is out for more than 48 hours then back-up contraception for next 7 days is required.
Nuva Ring-> inserted for 3 weeks then discarded. 1 week ring free. New cycle new ring.
Annovera Ring. - > inserted for 3 weeks. 1 week ring free. Reinsert the same ring for next cycle.
Totally it can be used for 13 cycles.

Contraceptive Patch:
Transdermal Patch applied to the skin that releases synthetic Estrogen and Progestogen hormones to prevent pregnancy.
Usage : Weekly application for 3 weeks f/b 1 week patch free.
Mechanism of Action :
Progesterone is absorbed in small amount and prevents ovulation.
Endometrium lining is thin thus prevents implantation.
Cervix becomes hostile.
Failure Rate : Less than 1%

Advantages of newer methods.
1. Less affected by antibiotics as compared to OCP's
2. Regular periods may be lighter and less painful
3. Highly effective, convenient and safe

Injectable DMPA - All that you need to know....

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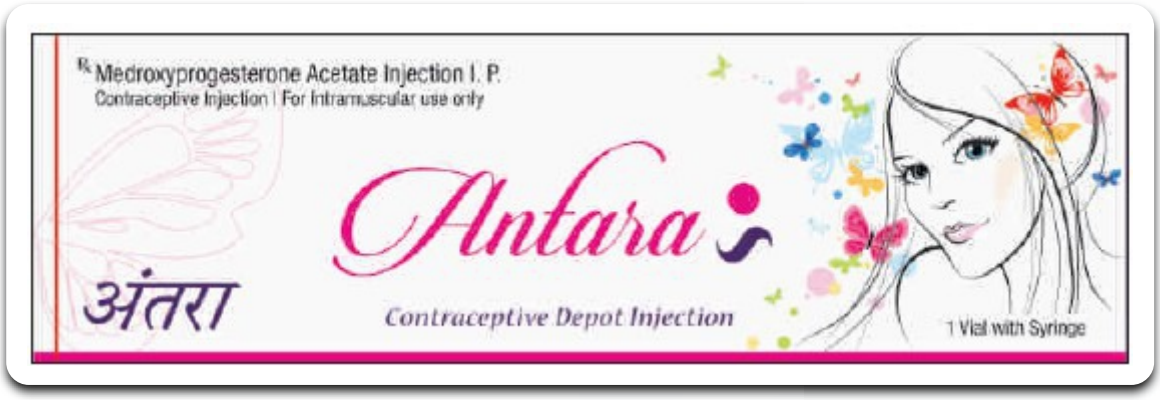
Injectable DMPA is the fourth most prevalent form of contraceptive used worldwide. It is used as an effective, safe and acceptable method of contraception across the world.

Composition:
It is an aqueous suspension of microcrystal for depot injection of pregnane 17 alfa – hydroxyprogesterone – derivative progestine medroxyprogesterone acetate.1

Routes of DMPA Injectable Contraceptive:
Single dose contains 150 mg of aqueous suspension of DMPA to be given every 3 months

1) Intramuscular DMPA: available as
   a) Single dose vial with disposable syringe and needle
   b) Prefilled syringe with needle
2) Subcutaneous DMPA: Prefilled auto disable syringe

Injectable Contraceptive DMPA (Antara) in the National Family Planning Program[2]



Mechanism of action[3]

- Inhibits ovulation - by suppressing mid cycle peaks of LH and FSH
- Thickening of cervical mucus - due to depletion of estrogen. The thick mucus prevents sperm penetration into the upper reproductive tract.
- Thin endometrial lining - due to high progesterone and low estrogen, making it unfavourable for implantation of fertilized ovum.

Safety[4]

DMPA is a safe contraceptive, even in breast feeding women. It has also been found that DMPA use:

- Exerts a strong protective effect against endometrial cancer.
- No overall increased risk of breast, ovarian & cervical cancer.
- It does not increase the risk of developing liver cancer in areas where hepatitis B is endemic.
- No significant changes in blood pressure or on the coagulation profile.
- Keeps the fertility intact although it takes a woman few months (4 to 6) longer to become pregnant after discontinuing DMPA in comparison to COCs, IUDs or barrier methods.

Effectiveness[5]

With a standard regimen and the perfect use the first year effectiveness is 99.7%.

Effectiveness depends on:

- Timing of first injection,
- Taking injections regularly on time
- Injection administration technique
- Post injection care and compliance.

Contraceptive Benefits

- Safe and highly effective with long term contraceptive benefits
- Convenient and easy to use (once in 3 months injection) and thus better compliance.
- Acts for 3 months with a grace period of 4 weeks.
- Completely reversible: fertility is restored within 7-10 months from date of last injection (average 4-6 months after 3 months effectivity of last injection is over).
- A private and confidential method.
- Does not interfere with sexual intercourse / pleasure.
- Pelvic examination and blood tests are not required prior to use.
- Suitable for women who are not eligible to use an estrogen containing contraceptive.
- Suitable for breast feeding women (after 6 weeks postpartum) as it does not affect quantity, quality and composition of breast milk.
- Provides immediate postpartum (in non-breastfeeding women) and post-abortion contraception.
- May be used by women at any age or parity if they are at risk of pregnancy.
- No estrogen side-effects like dyslipidemia and increased risk of heart attack etc.

Non Contraceptive Benefits

- Decreases dysmenorrhea and reduces symptoms of pre-menstrual syndrome.
- Improves anemia by reducing menstrual blood loss.
- Reduces the symptoms of endometriosis.
- Decreases benign breast disease and ovarian cyst.
- Helps prevent fibroids and also reduces the associated heavy bleeding.
- Reduces the incidence of symptomatic pelvic inflammatory disease (PID).
- Protect against endometrial cancer and possibly ovarian cancer.
- Reduces sickle-cell crises in women with sickle cell anemia.
- Protects against ectopic pregnancy (since ovulation does not occur).
- Minimal drug interactions – no demonstrable interaction has been found between DMPA and antibiotics / enzyme-inducing drugs.

Limitations

- It does not protect against STI / RTI and HIV infection.
- Once taken its action cannot be stopped immediately.
- It causes changes in the menstrual cycle and bleeding pattern leading to intermittent bleeding episodes and amenorrhea after prolonged use.[6]
- Return of fertility takes 7-10 months from date of last injection (Average 4-6 months after 3 months effectivity of last injection is over)
- Breast tenderness, weight gain, acne and depression are bothersome side-effects

Contraindications

- Lactating mothers less than 6 weeks post-partum
- Current or past history of breast cancer
- Current or past history of ischaemic heart disease, severe hypertension, diabetes mellitus for than 20 years or associated with damage to vision, kidneys or nervous system
- Current deep vein thrombosis or pulmonary embolism
- Active viral hepatitis, severe cirrhosis, benign or malignant liver tumors

When to Start DMPA Injection[7]

A DMPA injection can be started any time if it is reasonably certain that the woman is not pregnant. A physical examination is not necessary before DMPA administration; however it is a good clinical practice to take routine examination.

Woman's situation	*When to start*
Having menstrual cycles or switching from a non-hormonal method	• Can be started any day within 7 days of menstrual cycle with no need for a backup method. • Can also be started any time later in the menstrual cycle (after 7 days) if it is reasonably certain that the woman is not pregnant (no history of unprotected sex since LMP). She will need a backup method (e.g. condom) for the first 7 days after the injection. • Can be started immediately, if she is switching from an IUCD.
Switching from a hormonal method	• Can be started immediately, if she has been using the hormonal method consistently and correctly or if it is reasonably certain that the woman is not pregnant. • No need to wait for her next monthly bleeding. No need for a backup method
Post - Partum Women breastfeeding	
Less than 6 months postpartum	• Wait until 6 weeks postpartum and then start DMPA. • Can be started any time between 6 weeks and 6 months, if she is fully or nearly fully breast feeding and her monthly bleeding has not returned. No need for a backup method.

	• Can be started at any time between 6 weeks and 6 months, if she is partially breast feeding and her monthly bleeding has not returned and if it is reasonably certain that the woman is not pregnant. She will need a backup method (e.g. Condom) for the first 7 days after DMPA injection. • If her monthly bleeding has returned, she can start injectable as advised for women having menstrual cycles.
More than 6 months postpartum	• Can be started at any time, if her monthly bleeding has not returned and if it is reasonably certain that the woman is not pregnant. She will need a backup method (e.g. Condom) for the first 7 days after DMPA injection. • If her monthly bleeding has returned, she can start injectable as advised for women having menstrual cycles

Post-Partum Women not breastfeeding

Less than 4 weeks after giving birth	• Can be started at any time. No need for a backup method
More than 4 weeks after giving birth	• Can be started any time, if her monthly bleeding has not returned and if it is reasonably certain that the woman is not pregnant. She will need a backup (e.g. Condom) method for the first 7 days after the injection. • If her monthly bleeding has returned, she can start injectable as advised for women having menstrual cycles.

Other Situations

No monthly bleeding (not related to childbirth or breastfeeding)	• Can be started any time if it is reasonably certain that the woman is not pregnant. She will need a backup method (e.g. Condom) for the first 7 days after the injection. • Can be started immediately after abortion or within 7 days of first or second-trimester miscarriage/abortion, with no need for a backup method.
After miscarriage or abortion	• Can also be started after more than 7 days of first or second trimester miscarriage/abortion, any time, if it is reasonably certain that the woman is not pregnant. She will need a backup method (e.g. Condom) for the first 7 days after the injection.
After taking Emergency Contraceptive Pills (ECPs)	• Can be started on the same day as the ECPs. • Can also be started within 7 days of monthly bleeding. • A backup method (e.g. Condom) will be required for next 7 days. • She should be asked to return, if she has signs or symptoms of pregnancy other than amenorrhea.

Immediate Post Injection Counselling

- Not to massage or apply hot fomentation at the injection site as it may hasten the absorption of DMPA leading to early weaning of the effect.
- The injection needs to be repeated every 3 month. She should visit the doctor on the date mentioned on her DMPA card.
- Explain that menstrual changes are common with the DMPA so she should not panic if they occur
- Tell her she can return any time, especially if she has concerns or problems.

DMPA in special situations

DMPA & Bone Effects[8]

DMPA injectable use is associated with 5 -6% decrease in bone mineral density over a 5 years time period. Maximum loss is seen in the initial first two years. The decrease in BMD is temporary and reversible on discontinuation of DMPA . There is no increase in fractures. Routine bone mineral density monitoring is not recommended in any population using DMPA.

DMPA in Adolescents[9]

- Adolescent DMPA users will show a slower increase in Bone Mineral Density (BMD) values when used over 2 years period compared to non hormonal users.
- However, complete recovery of BMD was observed with follow up within 3-5 years and there is no effect on subsequent fertility

DMPA in Women > 35 Years of Age

- No substantial increase in the overall incidence of Venous Thrombo Embolism (VTE), myocardial infarction or cerebrovascular accidents have been noted in large trials.
- Therefore, DMPA is safe and an effective available option for high risk women of over 35 years.
- Women who wish to continue using DMPA should be reviewed every 2 years to assess the benefits and risks.
- Users of DMPA should be supported in their choice of whether or not to continue using DMPA beyond 45 years of age after weighing the pros and cons.

DMPA in HIV Positive Women

- WHO recommends that DMPA is a safe, category 1 option for women infected with HIV.
- Condom use is strongly encouraged along with DMPA.
- There is also no definitive evidence on the possible interaction between DMPA and anti-retroviral drugs.

Failure and Risk of Exposure to Foetus in Utero

- There is no increased risk of congenital anomaly or effect on growth and development of children in case of treatment failure or conception shortly after discontinuation of DMPA.
- In case a pregnancy occurs during DMPA use, the client should discontinue the use of DMPA.
- She can continue with pregnancy, if she wishes to

Conclusion

Depot Medroxy Progesterone Acetate (DMPA) is a hormonal contraceptive with high acceptability as it is given once in three months and it can be given outside clinical facilities. It is also low cost , highly effective and safe method. It is a reversible method and women's chances of getting pregnant after stopping its use are no different from those who have not used DMPA.

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CAPSULE

Margaret Higgins Sanger

(September 14, 1879 – September 6, 1966)

Margaret Sanger was an American birth control activist, sex educator, writer, and nurse. Sanger popularized the term "birth control", opened the first birth control clinic in the United States, and established organizations that evolved into the Planned Parenthood Federation of America.

In 1916, Sanger opened the first birth control clinic in the United States. Sanger felt that in order for women to have a more equal footing in society and to lead healthier lives, they needed to be able to determine when to bear children. She also wanted to prevent so-called back-alley abortions, which were common at the time because abortions were illegal in the United States. She believed that, while abortion was sometimes justified, it should generally be avoided, and she considered contraception the only practical way to avoid them.

In 1921, Sanger founded the American Birth Control League, which later became the Planned Parenthood Federation of America. In 1929, she formed the National Committee on Federal Legislation for Birth Control, which served as the focal point of her lobbying efforts to legalize contraception in the United States. From 1952 to 1959, Sanger served as president of the International Planned Parenthood Federation. Sanger remains an admired figure in the American reproductive rights movement.

Emergency Contraception

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Introduction

Unintended pregnancy is a major public health problem. Unintended pregnancy can have a variety of negative outcomes for the individual woman, including death or significant morbidity following child birth or unsafe abortion. Unintended pregnancy can also have a negative impact on a woman's psychological well being and the socioeconomic status of her and her family.

Emergency contraception (EC) can help reduce the risk of an unintended pregnancy when no method of contraception has been used or when a contraceptive method fails (e.g. condom bursts).

The World Health Organization (WHO) includes EC on its list of essential medicines and has advised that increased access to EC (including for adolescents) as it protects against negative health outcomes and does not increase the risk of sexually transmitted infections or unwanted pregnancies.

EC works by preventing pregnancy, and it is not abortifacient.

The recommended methods of EC that are in common use include the copper-bearing intrauterine device (Cu-IUD) and the oral drugs levonorgestrel (LNG) and ulipristal acetate (UPA).

EC methods and mechanism of action

Over the years, different oral hormonal forms of EC have been used. One of the first methods was the Yuzpe method, consisting of 2 doses of a combination of oestrogen and progestogen (100 mcg ethinylestradiol and 0.5 mg of LNG), taken 12 h apart.

Other hormonal methods followed this, including the use of LNG (1.5 mg), which was shown to be more effective as an EC than the Yuzpe method. The progesterone receptor modulator mifepristone (at dose 10 - 25 mg) has been found to be more effective as an EC than LNG, but it is available only in a small number of countries for EC [1].

Recently, the progesterone receptor modulator UPA (30 mg) has been introduced for EC. All of these oral methods of EC are known to be capable of delaying or inhibiting ovulation, until sperm are no longer viable (presumed life span of sperm in the female reproductive tract is five days) [2]. UPA has also been shown to be more effective than LNG in clinical trials [3].

This is attributed to the ability of UPA to delay ovulation even in the immediate pre-ovulatory period and after the onset of the luteinizing hormone (LH) surge but before the LH peak, whereas LNG is no longer able to delay ovulation once the LH surge (ovulatory trigger) has commenced [3]. LNG is licensed to be used within 72 h of sexual intercourse and UPA within 120 h . Both are well tolerated and have a similar side effect profile and can be used repeatedly in the same menstrual cycle [2].

Neither Cu-IUD nor oral forms of EC are abortifacients. There is no robust evidence that oral EC (LNGor UPA) can prevent implantation. Biomedical studies have shown that post ovulatory administration of either LNG or UPA (EC doses) does not adversely affect the development of a secretory endometrium. Although UPA is known to have some endometrial effects, the doses of UPA that are used for EC are not generally considered sufficient to prevent implantation .

Further evidence that oral EC does not prevent implantation comes from in vitro studies using an implantation model of endometrium and human blastocysts, which have shown that administration of either LNG or UPA (in doses equivalent to that of EC) is unable to prevent implantation .

Oral EC does not exert an adverse effect on a pregnancy. Clinical trials show that the incidence of miscarriage in women who take oral EC (LNG or UPA) is no greater than what one would expect to observe in the general population. The available data for outcomes of pregnancies exposed to UPA are more limited, but data of more than one million women who used UPA in clinical trials and post-marketing surveillance studies are consistent, with no higher incidence of congenital abnormalities in babies born after exposure to UPA.

Effectiveness

Estimates of effectiveness are made from clinical trials comparing the number of observed pregnancies after EC compared to expected pregnancy rates in the absence of EC (based on likelihood of conception at the particular point in the menstrual cycle when sex occurred). In recent clinical trials of LNG and UPA, the observed pregnancy rates have been low 1-2%, and expected pregnancy rates have been calculated at approximately 5%.

By far, the most effective form of EC available is the Cu-IUD, indicating an observed pregnancy rate of 1 in 1000, when a Cu-IUD is used as EC. The main mechanism of action of a Cu-IUD is the inhibition of fertilization, due to the toxic effects of copper on sperm and ova. It is also known to cause an endometrial inflammatory reaction, which prevents implantation. The Cu-IUD can be used over a wider time frame than oral EC. Guidelines advise that it can be inserted up to five days after the earliest date of ovulation [2]. It can also be retained as an on-going regular method of contraception. In spite of its high efficacy, it remains an underutilized method of EC, as it requires the availability of a trained provider and an invasive procedure.

Factors predictive of unintended pregnancy after oral EC

Risk factors for failure of LNG and UPA for EC reported were cycle day of intercourse, further episodes of sex in the same cycle after EC and obesity associated with a higher risk of unintended pregnancy. There was a fourfold higher risk of pregnancy observed amongst women who went on to have further acts of unprotected intercourse in the same cycle following use EC compared to those who did not have further episodes.

It is therefore clearly important than an on-going method of effective contraception is commenced following use of EC.

The risk of unintended pregnancy was almost fourfold greater for women with a BMI in the obese range than those with a BMI in the normal range (>30 kg/m2 versus <25 kg/m2) and that the risk was greater for women with obesity who received LNG rather than UPA.

Guidelines from the Faculty of Sexual and Reproductive Healthcare, UK, advise that hormonal methods of contraception can be started immediately after LNG but not after UPA [2]. This is because a progestogen-containing hormonal method of contraception could interfere with the action of UPA on the progesterone receptor and impairs the ability of UPA to delay ovulation.

Starting a combined hormonal contraceptive pill after UPA also appears to have a deleterious effect on the ability of UPA to delay ovulation.

Future developments in EC

As already discussed, the mechanism of action of LNG and UPA oral EC is by inhibiting ovulation such that sperm are no longer viable when ovulation occurs [2]. Therefore, both are only effective for a limited time in the menstrual cycle. As prostaglandins play an important role in follicular rupture, it was hypothesized that the addition of a prostaglandin inhibitor, meloxicam (cyclooxygenase inhibitor), to LNG for EC may further impair follicular rupture and ovulation and increase its effectiveness [4].

A pilot biomedical study showed an increased incidence of failure of the follicle to rupture in cycles where LNG was combined with meloxicam versus placebo (88% of cycles with meloxicam versus 66%)[4]. Larger studies including clinical trials are required to investigate the efficacy of this approach including that of combining a prostaglandin inhibitor with UPA.

In the 1980s, researchers coined the term contragestion for a method that would work through out the menstrual cycle to prevent pregnancy including when taken in the late luteal phase to disrupt a very early pregnancy .

Post ovulatory administration of mifepristone in a dose of 200mg as been shown in studies to exert endometrial effects and therefore possible post-fertilisation effects on impairing implantation [5].

Studies have also shown that a combination of low-dose mifepristone and misoprostol administered around the time of expected menstruation has been shown to be safe and to effectively maintain nonpregnant status [6].

A method of EC that could prevent establishment of pregnancy even once the process of implantation had begun could lead to a much more effective EC.

Summary

All women deserve access to EC to prevent unintended pregnancy. The existing oral methods of EC are only effective if ovulation has not yet occurred. However, EC is not always used when required, and more episodes of sex may take place after EC, which may partly explain why there has not been any impact of EC on abortion rates at the population level, even when oral EC is provided in advance to keep at home in case of need.

The Cu-IUD is the most effective available method of EC, and its efficacy is unaffected by body mass index, but its use is limited by its acceptability and the invasive procedure to insert it. Given the continued risk of pregnancy after EC, another important strategy is to provide effective contraception after oral EC and to encourage uptake of the most effective long-acting reversible contraceptive (LARC) methods. Research is also required to develop a more effective oral EC and to investigate the acceptability to women and feasibility of a method that might remain effective even after ovulation has taken place.

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Contraceptive Word finder Puzzle

By Dr Bhavini Shah

1. Index of contraceptive failure
2. Father of the pill
3. Best spermicide for contraception
4. Most common side effect of frameless IUD
5. Pill with 0.15mg LNG + 0.03Ethinyl Estradiol to be taken for 84 days
6. Anti kochs drug that will interfere with the effect of oral contraceptive pills
7. Non hormonal, synthetic once a week oral contraception
8. A regimen used for emergency contraception
9. A contraceptive device that requires a hysteroscope for insertion and not yet available in India
10 Clinically useful indication of approaching ovulation…

I	Q	T	L	S	O	Y	C	D	H	C	D	X	Z	P
C	E	J	Q	S	L	L	B	W	E	Z	X	L	J	E
L	A	R	P	N	A	R	E	N	J	E	I	N	Z	A
L	H	R	X	Y	Z	H	T	L	I	F	P	O	K	R
Y	O	S	L	N	I	C	I	P	M	A	F	I	R	L
U	T	N	U	D	H	J	L	N	U	B	Z	S	E	S
Z	E	I	Y	R	J	J	L	U	R	X	I	L	X	I
P	E	G	O	X	G	E	E	B	W	S	A	U	H	N
E	H	M	Q	I	O	E	R	C	O	N	J	P	W	D
H	A	P	O	O	R	N	D	R	O	Z	P	X	A	E
N	A	T	D	C	Z	P	O	S	A	O	D	E	I	X
K	V	M	B	Y	G	N	A	N	H	S	U	M	Q	P
V	Q	X	E	N	S	E	K	O	U	M	I	J	H	D
F	D	F	R	A	S	M	I	C	R	O	C	O	I	L
U	M	U	G	K	N	X	H	K	N	L	K	G	U	E

Answers on page 43

Contraception In Covid Times

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"Contraception protection is something every woman must have access to, to control her own destiny"
RUTH BADER GINSBURG

As the world grapples with the novel COVID-19 pandemic, we in the public health community must continue to provide guidance and support to ensure that all women, men, and adolescents can access safe and affordable contraception and contraceptive services. Adjustments to the way services are provided are inevitable; however, quality and access to services must be maintained.

Globally, approximately 50% of pregnancies are unintended.[1] In low- and middle-income countries, where access to health care may be limited, unintended pregnancies can have dire consequences ranging from unsafe abortion to serious pregnancy complications that contribute to maternal and infant mortality.[2] As such, contraception is lifesaving and an essential component of reproductive health care. The ability to access and continue using contraception improves women's reproductive autonomy, reduces unintended pregnancies, and profoundly impacts both women's and family's lives, health, empowerment, and well-being, particularly in times of stress and hardship.

The environment in which we work has changed forever as a result of the coronavirus pandemic. To ensure continuation of contraceptive access and services, including counselling and shared decision making, a number of adaptations to existing systems are required, in particular, maximizing the use of a "no-touch" approach to care whenever possible.

Use Telehealth for counselling and screening

- Use various communication methods that do not require in-person contact (SMS, WhatsApp, video calls, or telephone calls) to counsel new clients requesting contraception and to screen for medical eligibility.
- Issue new prescriptions and refills for clients who desire user-controlled contraceptives (e.g., combined oral contraceptives, progestin-only pills, contraceptive patches, or vaginal contraceptive rings) if no contraindications are evident.
- Send all prescriptions directly to the pharmacy or clinic to limit contacts.
- Inform clients who desire long-acting reversible contraceptives (LARCs) of service locations where LARCs are being provided.
- Manage and treat contraceptive side effects, if possible.
- Provide additional counselling and information
- Counsel on fertility awareness methods and correct and consistent condom use in case disruptions occur in the supply of other contraceptive commodities.[3]

Counsel current LARC users on the effectiveness of extended use beyond the labelled duration, postponing routine removals.[4]

- Educate clients on emergency contraception including both over-the-counter and prescription options.

Optimize how clients access contraceptive methods

- Prescribe/dispense multi month refills to minimize trips to the pharmacy or clinic.
- Health insurance plans (where existing) should waive time limitations on refills to allow for multi month dispensing and should consider eliminating or decreasing prescription costs.
- Train for and offer self-injection of Depoprovera /Sayana Press (DMPA-SC), where available, for women desiring injectable contraception.[5]
- Continue to offer insertion of LARC methods, such as intrauterine devices and contraceptive implants, to new users where possible with adequate safety preparations for the procedure.
- Make arrangements to avoid having too many clients in the waiting area. This may involve scheduling clients individually, having clients wait outside, and/or ensuring clients maintain adequate social distancing precautions while inside.
- If LARC insertion is unavailable, offer the client user-controlled methods.
- Limit direct contact with current LARC users to situations where removal cannot be delayed or when side effects require a physical / pelvic exam or other tests.
- Consider placing clients who desire permanent contraception on waitlists and offering them bridge contraception as operating rooms ramp down all but the most urgent surgery.
- Provide advance prescriptions for emergency contraception to increase awareness and reduce barriers to immediate access.

Make considerations for postpartum women

- Where possible, initiate or continue counselling and access to immediate postpartum contraception before hospital discharge, particularly as access to postpartum visits becomes limited.
- Provide LARC immediately postpartum for clients who desire LARC and are eligible.
- Perform permanent contraception procedures for clients who desire it at the time of Caesarean delivery and/or after vaginal delivery, if available.
- Counsel on correct use of the lactational amenorrhea method.
- Administer DMPA, if the client desires.
- Prescribe or dispense user-controlled contraceptive methods, including Sayana Press where available, in sufficient quantities to be initiated or continued at home by women who are not breastfeeding or, if breastfeeding, initiated as soon as one of the lactational amenorrhea method criteria expires.

SUMMARY

Counselling Protocol of LARC in the New Normal after the SARS CoV2 pandemic

1. Initial Counselling by Phone
2. Enquire for flu like symptoms
3. Discuss all methods by video/ teleconsulting
4. Explain procedure by video consultation
5. Risk assessment
6. STI risk assessment
7. Explain Side effects
8. Take mobile number of patient
9. Suggest and supply online reading material in local language
10. Online consent if necessary (as suggested by local authorities)
11. Consent can be sent and collected by phone
12. Contact patient on day of appointment for flu like symptoms
13. Reduce contact time
14. Take all precautions to avoid crowding, infection and delay of procedure
15. Ask patient to wear a mask
16. Reduce foot fall , patient has to come to clinic alone
17. Maintain social distancing
18. Stagger appointments
19. Ask patient to wait outside if delay anticipated
20. HCW should wear PPE
21. Deep cleaning of waiting area and examination room after every patient
22. Check list and SOP for complications

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Answers for Contraceptive Word Finder Puzzle

1. Pearls index	2. Carl djerrasi	3. Nonoxynol 9	4. Expulsion
5. Seasonale	6. Rifampicin	7. Centchroman	8. Yuzpe
9. Microcoil	10. LH surge		

Teenage Contraception : Balancing Freedom With Responsibility

Dr. Medha Tankhiwale
M.S (Medallist), DNB
FMAS , Masters In ART (UK)

“Contraception was one such invention that formed the cornerstone of womens liberation"

This was a statement commonly reiterated by my grandmother when we frequented the conversation of womens emancipation. It was only then that I realized how the invention of the pill, IUCD and subsequently the plethora of contraceptive modalities had given women the ability to be masters of their own reproductive choices.

While contraception has finally established itself comfortably in women who have completed their family in the traditional sense or hope to space it out, its scope still remains much wider. Although it has percolated to a strata defined by society as single, independent, career centric women, one area still remains where it is yet to establish its roots –teens.

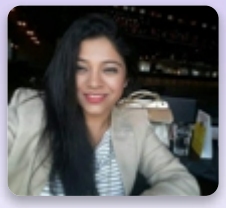
In a conservative society such as ours, offering contraceptive to a teen is always equated with giving them the right of passage to be sexually active. But being gynaecologists, all of us must agree that it is our duty to maintain the reproductive health of a women, irrespective of social norms and age. Being a sensitive topic it is always met with a certain degree of resistance, overcoming which is the biggest challenge.

I am sure we have all had that experience where an awkward teenager walks into our consulting, looking for contraceptive advice. A few of them beat around the bush, trying to calm their nerves, and following a 'Kindly do not judge me' they finally dive into the true nature of their visit. Then there is a second kind, the one that has researched via search engines and comes with an armamentarium of theoretical contraceptive knowledge but no practical knowledge whatsoever. Now we all know that there is an abundance of knowledge that can be tapped via the internet but it is a double edged sword. Every time that I, out of curiosity have researched the simplest condition, the inevitable 'cancer' has been an integral part of the article. Nonetheless I laud such patients for coming to the right source of information.

I truly feel that approach to a teenager must begin by assuring them, making them feel comfortable and listening to them. Only once this has been achieved and you are with them at their wavelength have you earned the possibility of a rational conversation. Most of our colleges and teaching institutes do not provide a good or rather any reproductive health education. Hence whilst dealing with teenagers it is always good to start with the basics and to remove any misconceptions, wrong information and ideas. It is also important to determine on which side of 18 years they fall, for the purpose of legal and ethical considerations. Now having given them a sound background we can now proceed to gently broach on the topic of 'abstinence' and involvement of a parent/ parent figure. The former might prove to be easier as once having understood the concepts of STD's (and their implications) and unwanted pregnancies, they might tread the path of abstinence. The latter however seems to be difficult as a parent / parent figure may first themselves go through the seven stages of grief before actually accepting their childs choices.

The next step would be to offer your teenage patient the choice of contraception most appropriate for her. We must however take into consideration the following factors-1. Her overall health, 2.How well the method prevents pregnancy 3.Whether it prevents STD 4. Implications on future reproductive health 5. Ease of use 6. Cost. These factors narrow down our options into two 1. The barrier method (Male condom or female diaphragm) 2. Oral contraceptive pills. While the former fulfills all the criteria the latter is a close second which can be used along with the first to reduce failure rates. Both these contraceptive methods with their advantages disadvantages possibility of failure, side effects and proper usage must be explained. I cannot emphasize how important it is to deter the patient from frequent use of the emergency contraceptive pill, which has unfortunately gained popularity for routine rather than emergency use. As important as it is to dispense advice, its equally important that the patient understands the importance of follow up incase of any untoward symptoms or suspected pregnancy.

Cultural, traditional and religious taboos and sentiments compounded by legal and ethical issues make teenage contraception a sensitive and delicate matter. However it must still be tackled head-on. While a change in the mindset of society may take a while, efficient communication, dispensing of correct and appropriate advice via various mediums can definitely be a first step in bridging these gaps both in urban and rural communities.



HAVE SOME FUN

Humour on Contraception

Dr. Rajashri Tayshete
Consultant Gyn and laparoscopic surgeon Assisstant Professor at BYL Nair Hospital

A Birth control pill for men, that's fair.
It makes more sense to take the bullets out of the gun than to wear bulletproof vest.

- Greg Travis

What do you call couples that practice pulling out as a method of contraception?

Parents.

FAMILY PLANNING

When mom found my diaphragm, I told her it was a bathing cap for my cat.

- Lizz Winstead

Birth control that really works – every night before we go to bed we spend an hour with our kids.

- Roseanne Barr

Social Issue & Future Of Contraception

Dr Rana Choudhary
(MBBS, DNB, DGO, DFP, DCR, FCPS, FICOG, FICMCH, MNAMS)
Masters in Reproductive Medicine & IVF (UK), DRM (Germany)
Consultant Obstetrician, Gynaecologist & Reproductive MedicineSpecialist
Wockhart Hospital, Masina Hospital, Jagjivan Ram Hospital &
Ankoor Fertility Clinic, Mumbai. MOGS Youth Council Member

Introduction:

Over 200 million women worldwide would want to avoid a pregnancy but are not using an effective method of contraception [1]. Reasons for this vary from each country but are related to a lack of supplies, cultural and political barriers and poor quality of services [1,2].Hence, there is a need for newer contraceptives which are more effective, easier to use and safer. In this article, we discuss social issues related to contraception use and current research into its new forms.

Key facts [1 2 3 4]

- Worldwide women of reproductive age group (15-49 years) - 1.9 billion (2019) and 1.1 billion have a need for family planning
- 842 million - Using contraceptives
- 270 million - Unmet need for contraception
- Only one contraceptive method (Condoms) - Can prevent both pregnancy and transmission of sexually transmitted infections, including HIV.
- Use of contraception advances the human right of people to determine number and spacing of their children.

IUDs can cause infection or ectopic pregnancy, OCPs increase risk of cancers, when infact it reduces risk of colorectal, endometrial and ovarian cancer.

<u>WHO recommendations for women at high risk of HIV (2019)</u>

WHO has changed its recommendations for progestogen-only injectables and IUDs for women at high risk of HIV from a Category 2 to a Category 1. Recent evidence (high-quality RCT, ECHO trial) demonstrated no statistically significant differences in HIV acquisition among women using depot medroxyprogesterone acetate (DMPA-IM), Cu-IUDs, and levonorgestrel implants.

Social influences:

Till date there are various myths and misconceptions related to contraceptive use and hence the bias in using them. Common among these are : OCPs cause weight gain, IUDs can cause infection or ectopic pregnancy, OCPs increase risk of cancers, when infact it reduces risk of colorectal, endometrial and ovarian cancer.

Demographic forces, prevalence of disease, and social and cultural factors influence not only the use of contraceptives but also development of new methods. Age of onset of sexual activity is falling, whereas childbearing is being delayed. There is a demand for more “natural products,” which are perceived as safer, but with perfect efficacy. Modern contraceptive prevalence among Married women of reproductive age (MWRA) increased worldwide between 2000 and 2019 by 2.1 percentage points from 55.0% to 57.1% (1).

Reasons for this slow increase include:

- Limited Choice
- Limited access to services, particularly among young, poorer and unmarried
- Fear or experience of side-effects
- Cultural or religious opposition
- Poor quality of available services
- Users' and providers' bias against some methods
- Gender-based barriers to accessing services

Social issues related to contraception [1,2,3]

- Ensuring access for all people to their preferred contraceptive methods advances several human rights including
  - ✓ Right to life and liberty,
  - ✓ Freedom of opinion and expression,
  - ✓ Right to work and education,
  - ✓ As well as bringing significant health and other benefits.
- Use of contraception prevents pregnancy-related health risks for women, especially adolescent girls
- When births are separated by less than two years, the infant mortality rate is 45% higher than it is when births are 2-3 years and 60% higher than it is when births are 4 or more years apart.
- Non-health benefits:
  - ✓ Expanded education opportunities
  - ✓ Empowerment for women
  - ✓ Sustainable population growth
  - ✓ Economic development for countries

What will shape reproductive health issues in the coming years?

Every year, 303,000 women die from complications during pregnancy and childbirth. And approximately 1/3rd of maternal deaths could be prevented if women who did not wish to become pregnant had access to and used effective contraception [1,4.]

New delivery systems and selective receptor modulators [5]:

Contraceptive vaginal rings, transdermal patches, and gels have been introduced. Selective modulators of hormone receptors will likely replace currently available estrogens and progestins to avoid risks like venous thrombosis, while reducing incidence of diseases such as breast cancer. Organ-specific drugs, which produce desired effect only on critical reproductive processes, will likely become available.

Newer agents [5]:

- Progesterone antagonists and progesterone receptor modulators - Highly effective in blocking ovulation and preventing follicular rupture. These are undergoing investigations in the form of oral pills and in semi long-acting delivery systems.
- Combination of a contraceptive with an antiretroviral agent – Research is ongoing for dual contraception and protection against sexually transmitted diseases, to be used before intercourse or on demand, as well as for continuous use in dual-protection rings.
- Male contraception - Clinical trials have reflected promising results, however decreased likelihood of its availability in the current decade.
- Non-hormonal methods - Still at an early stage of research.

Blockage of follicle-stimulating hormone (FSH) [5]

- Blocking FSH receptor or inhibiting secretion of FSH with analogues of inhibin will interfere with spermatogenesis. It may be possible to use FSH receptor as a target to deliver another agent specifically to the testis.
- Inhibitors of FSH synthesis or action could prevent fertility but would require estrogen replacement to prevent side effects of hypoestrogenism. Arresting final maturation of oocyte before ovulation or follicle rupture would be a desirable method of contraception.

Preventing implantation [5,6,7]

- Progesterone induces transcription of various endometrial gene products involved in implantation eg, leukemic inhibitory factor, calcitonin, vitronectin, v 3 integrin, and 4 1 integrin. Specific antagonists of these products would be promising as new contraceptives.
- In ovary and uterus extensive angiogenesis occurs each month during formation of follicle, corpus luteum and endometrium. A potent antagonist of vascular endothelial growth factor prevented pregnancy in mice models.

Immunization[8]

- Sperm attaches to the egg through interaction of specific antigens on sperm surface with zona pellucida proteins of egg (such as ZP3). Immunizing female monkeys with zona pellucida proteins prevented pregnancy, but unfortunately produces autoimmune oophoritis with loss of oocytes and premature menopause. Immunization of women against sperm antigens should avoid such problems, but research is still in initial stages.
- Disrupting synthesis or delivery of proteins such as fertilin (important for function of sperm membrane), leading to incompetent spermatozoa. Interfering with final maturation of spermatozoa would result in sperm that would fail to fertilize an egg. However, concerns have been raised about the possible misuse of contraceptive vaccines, particularly if they are not fully reversible.

Conclusion:

Development of a new contraceptives is expensive and not without risks. The pattern of contraceptive use among women and men is unlikely to change radically in the next decade. In the coming 5 years, more sophisticated systems for delivery of steroid hormones, transdermally and intrauterine may extend the range of available options. In the coming decade new steroid antagonists (antiprogestins) will replace some current contraceptives and probably lead to once-a-month pill. By 10 to 15 years, the dream of an effective, safe male pill will probably become a reality, shifting the burden of responsibility for contraception more equally between men and women. Only then will women have truly achieved "the fifth freedom"—freedom from the burden of excessive fertility.

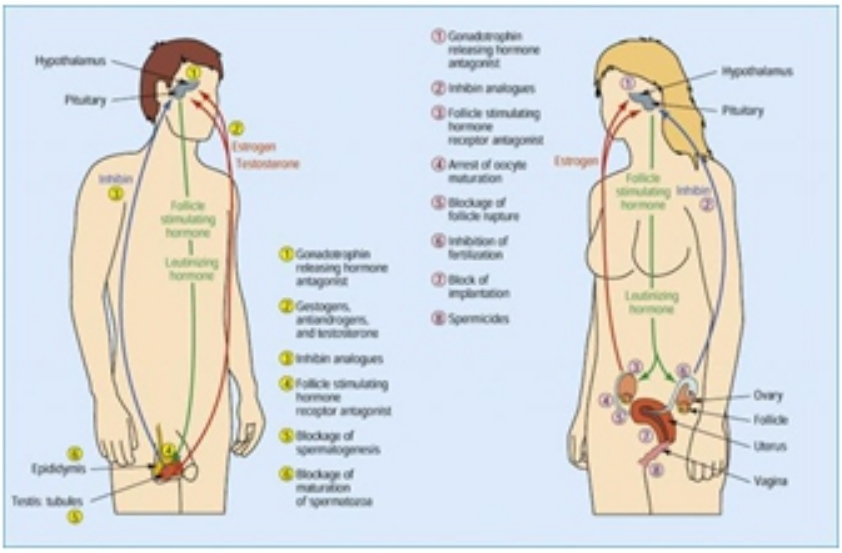


Fig 1: Potential targets for contraception in men and women

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FORTH COMING EVENTS

6th November 2020 7.00 pm - 8.30 pm

MOGS CME – Genetic Testing in Obstetric Practice
(In association with Metropolis Healthcare Limited)

21st & 22nd November 2020

MOGS in association with IVF Worldwide.

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25th November 2020

MOGS Dr. N A Purandare Teaching Program by Dr. R. N. Copper Hospital

Ineresting Facts About Contraception

By Dr Bhavini Shah

1. A CONTRACEPTIVE PLANT THAT BECAME EXTINCT!

One of the most famous ancient forms of birth control was the Silphium plant, native to North Africa. This plant was used as a contraceptive and was incredibly popular in ancient Greece and Rome. The plant could only be grown in a small area of what is now modern-day Libya. Over-cultivation of the plant led to its eventual extinction. Also, in ancient Greece, many plants were used as a form of birth control, including asafoetida, a close cousin of the extinct silphium.

2. WHY WERE CONDOMS CALLED THE FRENCH LETTERS ?

During World War I & World War II, condoms were packed in small paper envelopes and issued to English troops. A lot of the troops went to France for the war and the French were sexually liberated compared to their English cousins, so the name French Letter was coined.

3. WHAT WAS MASSAGE ABORTION?

Massage abortion is a procedure that has been described in Burma, Thailand, Malaysia, the Philippines, and Indonesia.The procedure was usually attempted when the woman was 12–20 weeks pregnant. She would lie on her back with her knees drawn up and the traditional birth attendant would attempt to fix the uterus and then press as hard as possible with her fingers or even a wood pestle or with the heel of her bare foot. The great temples of Ankor Wat
In Cambodia are decorated with some of these domestic scenes

MOGS has Talent - Amazing Photographs And The Story Behind Them

Dr Jesse M Levi
Consultant Obstetrician and Gynaecologist, Mumbai

William Henry Davies rightly said,
"What is this life if, full of care,
We have no time to stand and stare."
In today's world full of stress and struggle, we forget to stop and appreciate the beauty of this planet we call home. A pleasant walk through the woods, stargazing, watching the sun set by the sea shore can help anyone de-stress and calmly lay in the arms of mother nature. The aim of my photography is to capture moments which portray nature in all it's glory. Nature has multiple personas, it can be calm yet fierce, beautiful yet daunting, nurturing yet relentless.
Please enjoy my attempt to capture the majestic form of mother nature

INDIAN LEOPARD
(PANTHERA PARDUS FUSCA)
Photographed at: Bera leopard sanctuary, Pali,Rajastan.

INDIAN RHESUS MACAQUE
(MACACA MULATTA)
Photographed at Matheran, Maharashtra.

THE COMMON PICTURE WING
(RHYOTHEMIS VARIEGATA), FEMALE
Photographed at : Garden of Bolgatty Palace & Island Resort, Kochi, Kerala.

SPOTTED OWL
(ATHENS BRAMA)

PLAIN TIGER OR AFRICAN MONARCH
(DANAUS CHRYSIPPUS)
Photographed at : Mahim Nature Park, Mahim, Mumbai.

ROSE-RINGED PARAKEET
(PSITTACULA KRAMERI)
in flight(female), perched on the ledge(male).
Photographed at Mumbai (Khar,west)

INDIAN PALM SQUIRREL OR THREE-STRIPED PALM SQUIRREL
(FUNAMBULUS PALMARUM)
Photographed at : Khar(west), Mumbai.

GREAT WHITE PELICAN
(PELECANUS ONCROTALUS)
Photographed at : Keoladeo Ghana National Park, Bharatpur, Rajasthan.

THE COMMON BARON BUTTERFLY
(FUNAMBULUS PALMARUM)
Photographed at :Khar(west), Mumbai.

Lockdown Recipes

By Dr Siddhi Kore
Speciality Medical Consultant
Matoshri Ramabai Ambedkar Maternity Home,
Chembur Naka

Colourful Butter Cookies- Eggless

Perfect Teatime Snack | Kids enjoy as colorfull | Crispy and tasty

Ingredients:
Unsalted butter 200gms
Powdered sugar-1 cup
All purpose floor 2 & half cup
Vanilla essence

Instruction
Take 200gm unsalted butter in a bowl & beat till soft
Add 1 cup powdered sugar, beat tillsugar dissolves completely
Add 2 & half cup all purpose floor in batches and keep mixing
Add 2 tsp of vanilla essence
Make it into soft dough

Divide the dough into 4 equal parts, Add edible food colours around 5-6 drops -yellow, green, red.
For brown color, add 1/2 tsp coco powder
Knead each dough separately till soft smooth texture
Make small balls of colourful dough and follow shape or any design of your choice on a baking tray Bake in oven at 150C for 15 mins or in cooker on low-medium flame for 30 mins

CRISPY HONEY GARLIC CHICKEN WINGS

Crispy tender chicken wings tossed in homemade sauce (honey garlic)

SERVINGS :3

INGREDIENTS

1) Chicken wings - ½ kg
2) 2 eggs
3) 2 cloves of garlic (minced)
4) 1 cup honey
5) ¼ cup soy sauce
6) 2 cups plain flour
7) 3 tablespoons ginger powder
8) 2 tablespoons black pepper.
9) 2 tablespoons olive-oil
10) 2 cups oil edible oil.
11) 3 tablespoons water
12) Salt to taste
13) Spring onion and sesame for garnishing.

SAUCE PREPARATION-

1) In a small saucepan, heat the olive oil, over medium heat.
2) Add garlic to the pan and let it cook till it softens. (Do not let it become brown.)
3) Add honey, soy sauce and 1 tablespoon black pepper.
4) Simmer for 10-15minutes.
5) Remove from the heat and let it cool completely

WINGS PREPARATION-

1) Mix the flour, ginger powder, 1 tablespoon black pepper and salt.
2) Whisk the eggs and the water.
3) Wash the wings, pat them dry, trim the tips and cut them into sections. **
4) Dip the chicken wings into the egg wash.
5) Keep a pan with oil on flame for deep frying.
6) After the oil heats up sufficiently, dip each piece of egg-washed wings, tossed in flour, in the heating oil.
7) Double fry the wings if you want them to be crispier.
8) After taking them out of the oil, toss them (while they are still hot) in the honey garlic sauce.
9) Sprinkle some spring onion and/or sesame seeds.
10) SERVE HOT.

LOCKDOWN ART

"ART enables us to find ourselves and lose ourselves at the same time"
Thomas Merton

The best oxymoron which no one, other than an artist can understand.
Here are some of the artworks that emerged out of our Gynaecologist.

Dr Mansi Medhekar

The idea to sketch or colour during the lockdown period was to keep my 10 and 7-year-old occupied. To teach them different and simple art forms. It, in turn, helped me to de-stress. It made me feel good about myself.

As is rightly said "ART washes away from soul the dust of everyday life..."

Dr Medha Tankhiwale

Abstraction allows a man to see with his mind what he cannot physically see with his eyes.... Abstract art enables the artist to perceive beyond the tangible, to extract the infinite out of the finite. It is the emancipation of the mind. It is an explosion into unknown areas.

- Arshite Gorky

Dr Manisha Takhtanikundnani

Lockdown 2020 was a great stress for all... the transition from being a free bird to staying caged in the house was not easy at all...and it was during this time I took solace in my paints and brushes...painting felt like meditation. I have painted nearly every day during lockdown and am still continuing this new found passion...the bright hues of my paints bring in new energy, positivity and hope.

Dr Anjali Bapat

Way back in 1982, faced a dilemma while taking admission. I chose JJ Hosp over JJ School Of Arts.

Working as Gynaecologist in Mahim...has become a routine and mechanical.

Hence touched my brushes and pencils... and started walking on the road once left....tell you its a BLISS

'Lakescape' - Watercolour on paper

'Riviera Café' Watercolour (Monochrome) on paper

'A Lady With A Hat' - Charcoal Painting on box board

Dr Siddhi Kore
Speciality Medical Consultant
Matoshri Ramabai Ambedkar Maternity Home,
Chembur Naka

चित्रामध्ये सहज उमटले, जीवनाचे रंग जणू
समृद्धीचा हिरवा आणि कळ्यांना आपत्य म्हणू
जोडीदार तो सखा सोबती नात्यांचे धागेही विणु
शांत निळाई असे भोवती सूरेल जीवन गीत म्हणू

सोपं का आहे कान्हा, तुझी बासरी होणं
क्षतं तर पडतातच, अस्तित्व हरवतं
पण तू फुंकता प्राण , सप्तसूर होऊन गातं
अवघ्या जीवनाचं माझ्या , सार्थक होऊन जातं

नभ देई सावली शिरावर, मायेची पखरण होते
मोत्यांचे ते पीक डवरते ,भूमाता जादू करते

कधी येऊनी बसतील येथे, प्रेमी युगुले नेहमीची
कलकल ऐकू येईल पुन्हा हुंदडणा-या पोरांची
वाट पहातो बाक एकटा गजबजलेल्या बागेची
निसर्ग राजा जाईल वाया उधळण या हिरवाईची

Caption Credits Mrs. Archana Wartikar

My Journey to Ironman

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I was always fond of fitness, and was a regular gym- goer for many years. In 2011, a friend did the half marathon, and the idea of running 21.1 kms seemed interesting. Looking for a change , I joined a running group and started training four days a week. I soon fell in love with the outdoors. We were blessed to train at Juhu beach, which was serene and beautiful in the early mornings. Of course, it was a bit of a challenge to start the day as early as 4:50 am. After training, I would rush to work, and definitely found the need for rest in the afternoon.

Several half-marathons later, I made the natural progression to a 42 km run. However, I developed hyper-reactive airways due to smog allergy because of the early morning runs in winter. I suffered bronchospasm in two of the three marathons I ran. I had to take inhalers to be able to train in winter. Instead of making me fitter, running marathons was becoming counter-productive.

By then, two of my friends had completed the 70.3 Ironman, popularly called the Half Ironman. This comprises of a 1.9 kms open water swim, 90 kms of cycling and a 21.1 kms run, back to back. There are cut-offs to be met and the total time given is 8 and a half hours. The idea of doing three different sports intrigued me. But I had never had any formal training in swimming, and I had hardly ever cycled in childhood and never thereafter. Thus at the age of 45 years, in 2017, I found myself enrolling for swimming lessons. I also bought a hybrid bike and started cycling. I had my heart set on doing an Olympic triathlon at Goa in 2018. (1.5 kms swim, 40 kms cycling and 10 kms running).

Swimming and cycling were completely uphill tasks for me. I had to spend long hours in the pool. The Goa tri involved a sea swim, and till three months before, I couldn't even do the distance in the pool! But I kept at it and eventually managed.

Cycling was another saga. The thought of cycling on the pot-holed roads full of traffic petrified me. It took me a long time to get comfortable with road riding. After the Goa triathlon, I enrolled for the Kolhapur triathlon which had swimming in a lake and cycling on the open highway. I shaved off thirty minutes from my Goa timing and stood first in my age category. It was now time to take the plunge for a 70.3 Ironman.

While training for a triathlon, there are so many new skills to be learnt! Each sport has its own science and perhaps that's what makes it so exciting. I learnt to change tyres and repair punctures. Another important skill acquired was to ride on cleats. That basically means that your feet are clipped on to the pedal, and its common to fall while learning.

The training for the Turkey 70.3 was demanding. It has to be, with the distances involved. My day started at 4.45 am, and included an hour to three hours of rigorous training in any of the three disciplines. After my training I would rush to the clinic for my work. It was tough no doubt, but I enjoyed the process.

At Turkey, the water was cold and there were headwinds which made me struggle on the bike segment, but by God's grace I finished the three courses successfully, and proudly entered the Ironman family. I now look forward to improving my skills in the three sports and doing another 70.3 soon. The learning-
We are all busy professionals, and it is never going to be easy to take up a new activity, but its definitely possible with some time management. It is never too late in life to learn .

As our metabolism slows with age, we cannot get away with doing things we did in our 20s. While a marathon or Ironman is a bit extreme, any form of exercise must be a part of our routine. I'm quite sure that it is possible to find that one hour of me time in the day! It could be used for walking, running, swimming, yoga, cycling, dancing, gym training, Zumba, whatever one likes and enjoys.

HOW DOES ONE START?

-FIRST STEP IS OF COURSE SELF-MOTIVATION.

-FIND A GOOD COACH. IT GIVES THE VENTURE ACCOUNTABILITY AND STRUCTURE.

-ALWAYS ENSURE THAT YOU GET ENOUGH REST, HOWEVER. THAT IS NON- NEGOTIABLE.

-IT IS SAID, “THE JOURNEY OF A THOUSAND MILES BEGINS WITH A SINGLE STEP”. SO GET STARTED, AND ENJOY A FIT AND

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