THE PCOS SOCIETY INDIA

PANDORA

Volume 5 | Issue 1 | Feb-May 2020 | Pages 13

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Welcoming....

Our New Patron Members

Dr. Anjana Sahu

Dr. Aruna Dharmaraj

Dr. Neelam Nalini

Dr. Prerna Rajeev Shinde

Dr. Rabi Narayan Satapathy

Dr. Subhransu Pattnaik

Our New Life Members

Dr. Abha Gupta
Dr. Anisha Jayesh Zaveri
Dr. Anita Rath
Dr. Anusha Kamath
Dr. Aruna Kurdukar
Dr. Bijeta M.
Dr. Biswajit Mahapatra
Dr. C. S. Swathi Yohithaa
Dr. Cheriyl Sukumaran
Dr. Devi P.
Dr. Dhanji C. Ladumor
Dr. Dhivya Chandrasekaran
Dr. Gagan Lata
Dr. Geetha R.
Dr. Harpreet Kaur
Dr. Indira H.
Dr. Jayanta Chakraborty
Dr. Kala Vasishta
Dr. Kavita Gadekar
Dr. Kiran Guglani
Dr. M Chamundeeswari
Dr. Manjusha Saladi
Dr. Maulik Mori
Dr. Munira Zakir
Dr. Padmavathy S. Menon
Dr. Padmini Tutika
Dr. Phool Chand Yadav
Dr. Pooja Keshri
Dr. Pratima Himanshu Anjaria
Dr. R. Kalaiselvi
Dr. Rajesh Chandrakany Soni
Dr. Renuka Lalitha naga Ramaraju
Dr. Rupali Pavaskar
Dr. Sachin Patil
Dr. Sandhya Saharan
Dr. Saraswathi A. K.
Dr. Satish Tibrewala
Dr. Satyam Pancholi
Dr. Shabnam K. M.
Dr. Shakuntala P. N.
Dr. Sheetal Naik
Dr. Shirisha D.
Dr. Shraddha Ishwar Chaudhari
Dr. Shweta Agrawal
Dr. Snehal Patil
Dr. Subhadeep Basak
Dr. Sudeep Kumar
Dr. Sudeepthi Nalisetty
Dr. Umamaheswari Hullathy Dharuman
Dr. Vidhu Modgil
Dr. Vindhyashree Shivaraju
Dr. Vineela Kosuru
Dr. Vranda Vashistha
Dr. Zia Safi Mehdi

OBITUARY

Dr. Rekha Sheth
(25-01-1946 To 30-01-2020)

- Vice President of The PCOS Society of India
- India's Leading Cosmetic Dermatologist
- Founder President of Cosmetic Dermatology Society India (CDSI)
- Medical Director – Yuva Skin & Hair Clinic, Mumbai

Editorial

Dr. Duru Shah
MD, FRCOG, FCPS, FICS, FICOG, FICMCH, DGO, DFP
Director, Gynaecworld
The Center for Women's Fertility & Health, Mumbai
President, The PCOS Society, India
Chief Editor, Pandora

Dear Friends,

The year began on a sad note when the **PCOS Society of India lost its dynamic Vice-President Dr. Rekha Sheth** to cancer on 30.01.2020. She fought it very bravely and smilingly till the end. Rekha was an academician, the pioneer of cosmetic dermatology in India, besides being a dear friend! We will miss her!

We have all been facing probably one of the **worst epidemics of our time** and maybe losing our near and dear ones. All of us are **home bound** and going through various **emotions of frustration of being forced to slow down**, happiness that we can **spend time with our loved ones** which we had always craved for, and depression when we are left alone in our homes or stranded somewhere in another city or country! Let's **pray for all to be safe and healthy**, especially our **doctors, nurses and other health workers** who are at the frontline doing their best for all those who are affected.

On a happier note, I am glad to inform you that **over the last 4 years** our Society has **developed stability and credibility**. During these years, it was managed by the **Executive Committee** and we have now **appointed a Managing Committee of 16 members** from all over the country. We are confident that this high powered Committee which, was appointed on **1st April 2020**, will **help our membership and our academic activities rise manifold!** The list of the Members of our Executive Committee and Managing Committee appear in the column on the left of this Editorial Page. I would like to congratulate them and look forward to their commitment and dedication to the subject of PCOS.

Over the years, our academic activities have been very much appreciated, encouraging us to plan many more this year. We have an array of activities this year! Besides our **Annual Conference** which will be held between **7th-9th of August 2020 in Bengaluru**, we have the "**Online Expert Course**" our Live Course on the "**Art of ART in PCOS**", a "**National Online Quiz**" followed by a **Live Quiz** with the toppers during the Annual Conference. And the top winners will have amazing prizes! Besides our academic programs, this year we have initiated reaching out to our PCOS patients through the"**Conquer PCOS**" program. (Details of all programs are available on the website https://www.pcosindia.org/)

We have one more good news to share! The Society has **appointed a Manager**, Mrs. Pinali Goliya for the administrative work of the Society and she will be available for all queries on pinali.thepcossociety@gmail.com

Look forward to meeting you all soon, watch out for all our programs on https://www.pcosindia.org/. We will also be sending out all updates on our "**PCOS Society Whatsapp Groups**". All Members of the PCOS Society of India, are privileged to be on our "**Special Information Channel**" through "**Whatsapp**".

With warm regards,

Durú Shah
Founder President,
The PCOS Society of India

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www.pcosindia.org

Events & Update

International Programs

Webinars: "Hormonal Dysfunction in PCOS"

16th Jan. 2020

PCOS & Ovulation Induction

– Prof. Bart Fauser

I did attend the Webinar tonight and it was excellent as always – the quality of the sound and video, vast information and clinical experience of the speaker and of course Dr. Duru Shah's to the point superb moderation!!

– **Dr. Ratna Vijay** (Bengaluru)

Webinar was informative.

– **Dr. Bhairavi Joshi** (Ahmedabad)

Thoroughly enjoyed the webinar. Thank you so much.

– **Dr. Mini Nampoorthi** (Mumbai)

It was a really nice and informative talk by Prof. Bart Fauser on 16th Jan. I have gone through it, he has explained about pcos and ovulation induction for young gynaecologists who practice infertility, they must know all these practical things.Thanks to Dr. Duru Shah.

– **Dr. Priti Sahay** (Jharkhand)

12th Feb. 2020

Abnormal Uterine Bleeding in PCOS

– Prof. Nicholas Panay

Very useful, informative, dealt with day to day problems. Thank you.

– **Dr Shashwati Haldar** (Kolkatta)

Good. Your Q & A was excellent covering real life case scenarios.

– **Dr. Swati Lad** (Maharashtra)

Excellent, Very informative. Thank you.

– **Dr. Roza Olyai** (Gwalior)

Pretty good, well versed with the subject line.

– **Dr. Biswajit A.** (Maharashtra)

Very nice effort and very informative. More sessions should be organised.

– **Dr Anchal Gupta** (Uttar Pradesh)

National Programs

Webinar: "Advances in Infertility Management in PCOS"

Lt to Rt: Dr. Zoish Patel, Dr. Lipika.M, Dr. Vishesha Yadav, Dr. Duru Shah, Dr. Shulbha Arora, Dr. Vijay Mongoli, Dr. Pratik Tambe

6th Webinar 13th Nov. 2019

Topic: **PCOS and Assisted Reproduction Technology: Increasing efficiency and reducing complications**

Programme

- *Latest Guidelines/ Recommendations on ART in PCOS*
- *Panel Discussion with the Experts*

Lt to Rt: Dr Sujal Munshi, Dr. Shulbha Arora, Dr. Vijay Mongoli, Dr. Pratik Tambe

"Conquer PCOS" - A Patient Awareness Program

We know that PCOS is not easy. The sheer diagnosis itself can be daunting. In order to help spread awareness and get more women diagnosed with PCOS, **the PCOS Society of India** in collaboration with **Metropolis Healthcare Ltd**, have initiated an extensive awareness program for girls and women, called "**Conquer PCOS**".

As a part of this program, we are conducting various sessions in different Colleges and Institutions covering **six major cities** of the country, i.e **Mumbai, Pune, Bengaluru, Delhi, Kolkata & Chennai**. We have started these programs from **December 2019** and so far have covered 8 sessions with at least 10 sessions lined up in this month. Being the knowledge partner, the PCOS Society of India, has involved our members as speakers during these sessions. We thank all those who have participated in these programs which have been truly appreciated by girls and women.

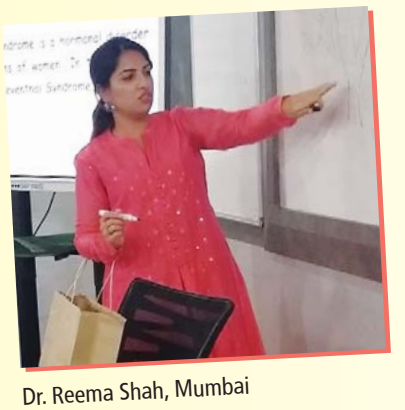
Dr. Basavaraj Devarashetty, Bengaluru

Dr. Laila Dave,Mumbai

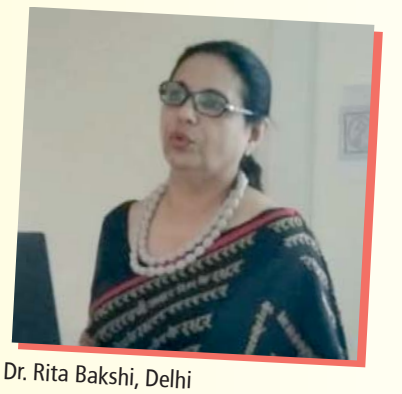
Dr. Madhuri Patil, Bengaluru

Dr. Madhushri Pandey, Mumbai

Dr. Manzer Shaikh, Mumbai



Dr. Reema Shah, Mumbai



Dr. Rita Bakshi, Delhi

Dr. Sudha Tandon, Mumbai

Why is Letrozole a preferred ovulogen in PCOS?

Dr. Gautam Khastgir
MD (Cal), FRCS (Edin), FRCOG (Lon), FICOG

Dr. Mayoukh Kumar Chakraborty
MBBS, DGO, MD (PGI, Chandigarh)

Polycystic ovarian syndrome (PCOS) is common and complex metabolic disorder which affects about 9 - 18% females in the reproductive age group and nearly about 80% among women with anovulatory infertility[1]. PCOS is categorized as Group II ovulation disorders according to World Health Organization (WHO).

In women with normally functioning hypothalamic-pituitary-ovarian axis (HPO) the major cause of anovulatory infertility is PCOS. Fundamental mechanism in PCOS is elevated or normal, but static level of Estrogen (E2), which through a negative feedback mechanism on HPO axis inhibits adequate release of follicle stimulating hormone (FSH) by the pituitary. As a result, there is an inadequate growth and development of ovarian follicles. In addition, elevated levels of E2 by positive feedback mechanism on HPO axis results in tonic increased state of luteinising hormone (LH) also from pituitary. Therefore, no LH surge occurs which results in anovulation [Fig 1]. According to the four folliculogenesis in PCOS, pre-antral follicle growth is excessive due to intrinsic androgen excess that renders granulose cells hypersensitive to FSH, with consequently excessive AMH expression[2].

The main aim of any ovulation induction drug is to result in mono-follicular development with minimal risk of multiple pregnancies and without any chance of resistance. Clomiphene citrate (CC) had been the 1st line drug for ovulation initiation over the last five decades. However, about 20-25% of females do not ovulate with CC resulting in its resistance. In these cases gonadotrophins is highly effective but with possibility of multiple pregnancies and ovarian hyperstimulation syndrome (OHSS). However, supra-physiological levels of E2 are an unwelcome side effect with both CC and Gonadotrophins. Elevated E2 levels can lead to asynchrony between the endometrium and maturation of the embryo during the "implantation window" period. Laparoscopic ovarian drilling (LOD) is also advocated as an option in CC-resistant cases, but it requires skill and adequate infrastructure with probable threat of lowering the ovarian reserve by damaging healthy ovarian tissue.

Clomiphene citrate remains bound with estrogen receptors for 60 days due to its longer half-life. If CC does not result in ovulation, any other ovulation inducing drug cannot be administered during this period. Although CC induces ovulation in 70-85% patients, only about 20-40% patients get pregnant, with a success rate of about 10-20% per treatment cycle. In addition, almost 20-25% anovulatory females are resistant to CC. Moreover, CC has unfavorable effects on cervical mucous and endometrial thickness because of its anti-estrogenic property[3]. Furthermore, prevalence of miscarriage after CC treatment is around 23.6%. This can be explained by the fact that extended use of CC leads to reduced uterine blood-flow during peri-implantation and luteal phase. Supra-physiological increased serum LH levels, collectively with premature luteinization and high serum E2 state during cycle may result in miscarriage or non-conception [Fig 2].

Fig 1: Mechanism of Anovulation in PCOS

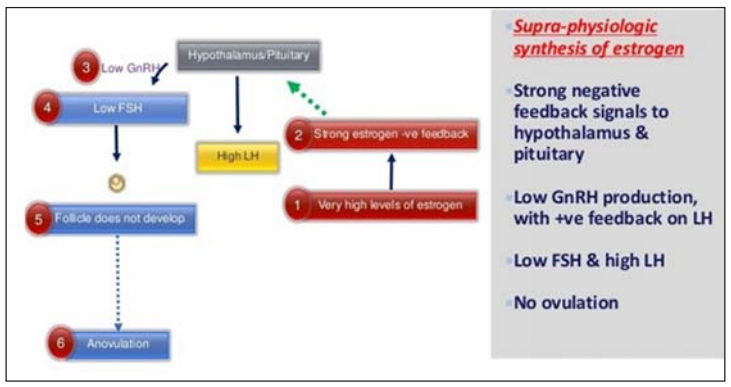
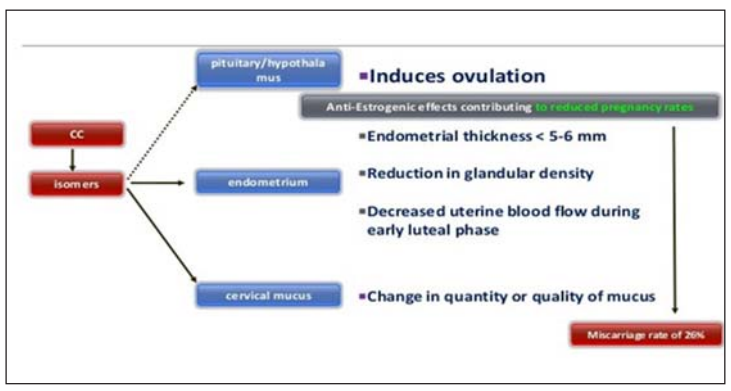


Fig 2: Side effects of Clomiphene Citrate

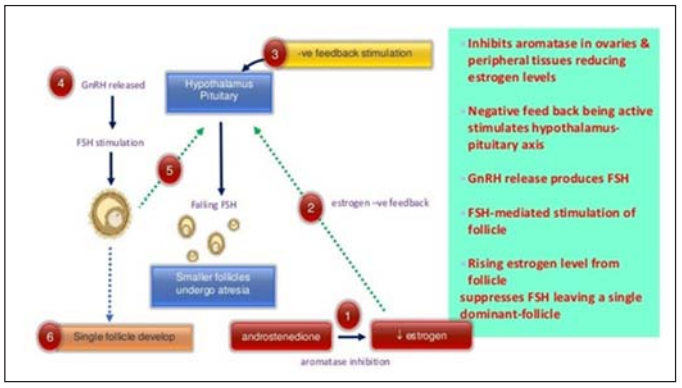


Letrozole is an aromatase inhibitor, which inhibits estrogen synthesis thereby relieving the HPO block and release of pituitary FSH. This helps to restore ovulation and thereby normal ovulatory cycle. It is a third generation aromatase inhibitor and repress estrogen synthesis by reducing conversion of androgens to estrogen. As a result, there is increased secretion of FSH and accumulation of Androgens within ovaries.

Letrozole is currently the 1st line ovulogen in women with PCOS particularly in CC resistant cases. For the activation of folliculogenesis, Letrozole causes temporary inhibition of estrogen synthesis thus allowing increased release of FSH[4]. Hypoestrogenic level is fast reversible because of small half-life of Letrozole (45 hours). In addition, there is no anti-estrogenic effect on the endometrium and cervix. Moreover, increase in testosterone level is helpful as it increases follicular sensitivity to gonadotrophin [Fig 3].

A well designed double blind multicenter RCT evaluating Letrozole vs. CC for infertile women with PCOS showed that Letrozole was superior along with better ovulation rate and high live birth rate[5]. A meta-analysis of 4999 cycles of ovulation (2455 with Letrozole, 2544 with CC) also revealed high pregnancy rate and live birth in the Letrozole arm[6]. When CC-resistant PCOS women were compared between Letrozole therapy and Laparoscopic Ovarian Drilling (LOD) treatment, the results were very similar between two groups[7]. Hence, Letrozole could be 1st line treatment in women with PCOS in general and definitely for CC resistant cases. Letrozole outcomes are superior due to synchronized follicular and endometrial growth.

Fig 3: Why Letrozole is better



A network meta-analysis compared available first-line treatment options for women with PCOS with infertility and found that Letrozole and combined CC – metformin were superior to other ovulation induction medications in terms of clinical pregnancy and that Letrozole resulted in more live births than other interventions, including CC[8].

The recent evidenced based guidelines for PCOS patients, developed by an International collaboration between three partners: Australian CRE-PCOS, ESHRE and ASRM, have suggested pharmacological therapy for ovulation induction in infertile women with PCOS. This evidence based review clearly states that Letrozole should be used as 1st line pharmacological treatment for ovulation induction [Fig 4] to increase ovulation, pregnancy and live birth rates[9].

An individual participant data (IPD) meta-analysis is considered as the gold standard for evidence analysis by providing accurate assessments of outcomes and allows additional analysis of time-to-event outcomes. It also facilitates treatment – covariate interaction analyses and therefore offers an opportunity for personalized medicine.

A recent such IPD meta-analysis of infertile women with PCOS showed that Letrozole when compared to CC improved both live birth and clinical pregnancy rates [Fig 5] as well as reduced time-to-pregnancy [Fig 6].

Fig 4: Algorithm for organization of Infertility in PCOS[9]

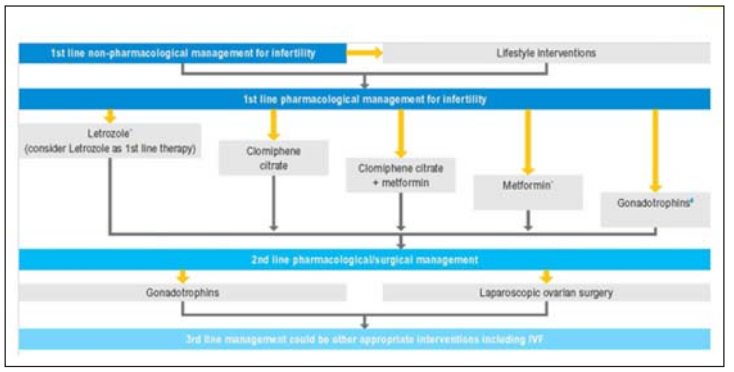


Fig 5: Meta-analyses of Letrozole vs. CC on live birth and clinical pregnancy

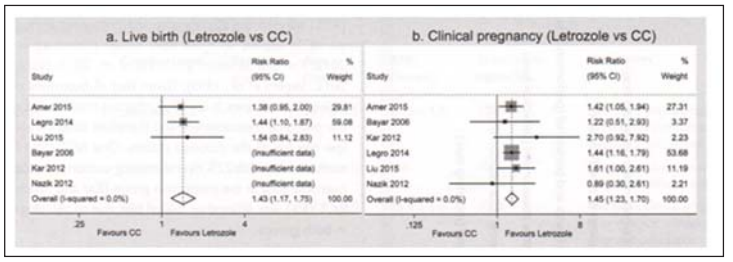
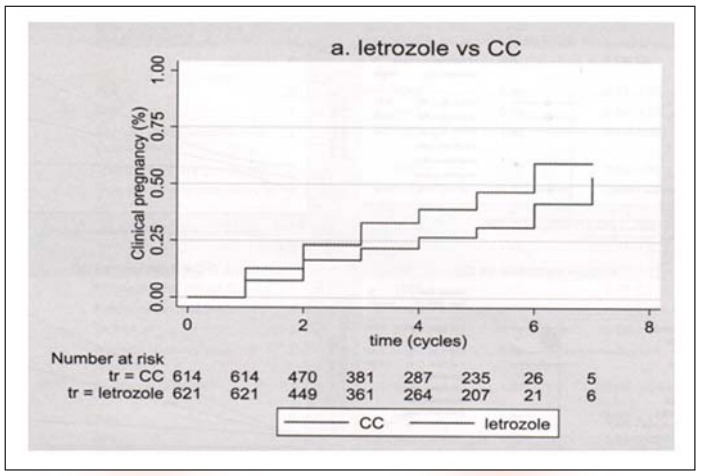


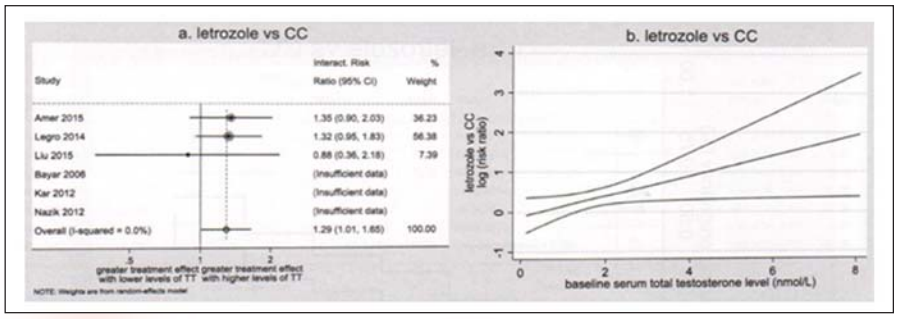
Fig 6: Summary of Kaplan - Meier curve for time-to-event outcome on Letrozole vs. CC



A recent such IPD meta-analysis of infertile women with PCOS showed that Letrozole when compared to CC improved both live birth and clinical pregnancy rates [Fig 5] as well as reduced time-to-pregnancy [Fig 6]. Therefore, it can be recommended as the preferred first-line treatment for women with PCOS and infertility[10]. It was also evident that the treatment effects of Letrozole were influenced by baseline serum levels of total testosterone [Fig 7].

Several studies have now concluded that Letrozole improves live birth and clinical pregnancy rates as well as reduces time-to-pregnancy compared to CC alone in infertile women with PCOS. The treatment effects of Letrozole are influenced by baseline serum levels of total testosterone and such findings provide further insights into a personalized approach towards the clinical management of anovulatory infertility related to PCOS and therefore should be confirmed in future studies. Presently Letrozole is the "wonder drug" for ovulation induction in anovulatory PCOS, considering its advantages of mono follicular growth and considerably minimal effect on endometrium. It has also been confirmed that Letrozole is as efficacious as LOD in CC resistant PCOS. Therefore, what can be better than taking an oral medication with minimum side effects for infertile women with PCOS.

Fig 7: Forest plot of interaction between baseline serum, total testosterone level and effect of Letrozole vs. CC on live birth



References

1. Balen AH, Morley LC, Misso M, Franks S, Legro RS, Wijeyaratne CN, et al. The management of anovulatory infertility in women with polycystic ovary syndrome: an analysis of the evidence to support the development of global WHO guidance. Hum Reprod Update. 2016; 22(6): 687-708.
2. Dewailly D, Robin G, et al. Interactions between androgens, FSH, anti-Mullerian hormone and estradiol during folliculogenesis in the human normal and polycystic ovary. Hum Reprod Update 2016; 22:709-724
3. Gadalla MA, Huang S, Wang R, Norman RJ, Abdullah SA, El Saman AM, et al. Effect of clomiphene citrate on endometrial thickness, ovulation, pregnancy and live birth in anovulatory women: systematic review and meta-analysis. Ultrasound Obstet Gynecol. 2018; 51(1): 64-76.
4. Mitwally & Casper. Use of an aromatase inhibitor for induction of ovulation in patients with an inadequate response to clomiphene citrate. Fertil Steril 2001; 75: 305-309
5. Legro RS et al, Letrozole versus clomiphene for infertility in the polycystic ovary syndrome. N Engl J Med, 2014;371:119-129.
6. Roque M, Tostes AC, Valle M, Sampaio M, Geber S. Letrozole versus clomiphene citrate in polycystic ovary syndrome: systematic review and meta-analysis. Gynecol Endocrinol. 2015; 31(12): 917-921.
7. Liu W, Dong S, Li Y, Shi L, Zhou W, Liu Y, Liu J, Ji Y. Randomised control trial comparing Letrozole with laparoscopic ovarian drilling in women with clomiphene citrate-resistant polycystic ovary syndrome. Exp Ther Med. 2015;10:1297-1302.
8. Wang R, Kim BV, van Wely M et al. Treatment strategies for women with WHO group II anovulation: systematic review and network meta-analysis. BMJ 2017; 356:j 138
9. Teede HJ, Misso ML, Costello MF, Dokras A, Laven J, Moran L, et al. Recommendations from the international evidence-based guideline for the assessment and management of polycystic ovary syndrome. Hum Reprod. 2018; 33(9): 1602-1618.
10. Wang R, Li W, Bordewijk M E et al. First-line ovulation induction for polycystic ovary syndrome: an individual participant data meta-analysis. Hum Reprod Update. 2019; 25: 717-732

Quiz

1. **You see a 25 year with complaints of acne and irregular periods. She has PCOS. You want to start her on combined oral contraceptive pill for her symptoms. She wants to know the side effects of the treatment. Which of the following describes the risk of thromboembolism in combined oral contraceptive pill users.**
   a. 2 per 100 pill years. b. 0.06 per 100 pill years
   c. 0.2 per 100 pill years d. 20-60 in 100 pill years
2. **Oral contraceptive pills reduces hyper-androgenism by following mechanisms**
   a. Decreased SHBG
   b. Decreasing the peripheral conversion of testosterone to DHT
   c. Inhibiting the gonadotropin secretion
   d. All of the above
3. **Metformin, a Biguanide is commonly used in patients with PCOS to manage insulin resistance. The following describes the mechanism of action of metformin-**
   a. Decreases hepatic glucose production
   b. Decreases intestinal glucose glucose absorption
   c. Improves insulin sensitivity
   d. All of the above
4. **Which of the following is true about Cabergoline?**
   a. Has a half life of 6 hours
   b. Is a Dopamine antagonist
   c. May cause Parkinsonian side effects
   d. All of the above
5. **What is the frequency of a transvaginal ultrasound scan?**
   a. 2 mhz b. 15 mhz
   c. 7 mhz d. 23 mhz
6. **Commonest defect with congenital adrenal hyperplasia**
   a. 21 hydroxylase deficiency
   b. 11 beta hydroxylase deficiency
   c. Mutation of cytochrome b5
   d. None of the above
7. **Flutamide belongs to**
   a. 5 alpha reductase inhibitor
   b. Progestin
   c. Anti androgen
   d. Aromatase inhibitor

Ans. 1. b 2. c 3. d 4. b 5. c 6. a 7. c

Is Progesterone effective in preventing Preterm Labour in multiple pregnancies after assisted reproduction?

Dr. Asha Baxi
M.S, FRCOG

Dr. Sonam Baxi
PhD candidate, General Sir John Kotelawala Defence University

The incidence of multiple pregnancies is increasing all over the world because of assisted reproductive technology or spontaneously as a result of numerous risk factors. Incidence of multiple pregnancies in India is reported to be around 1%, attributing to 10% of perinatal mortality.

With ART, the incidence of multifetal gestation goes up significantly. The perinatal risk increases disproportionately with the number of fetus and also monozygosity. IVF is associated with a 2 fold increase in monozygosity compared to natural conception. A meta-analysis of 12 studies concluded that IVF twins are at a higher risk of preterm birth and low birth weight.

Multiple pregnancies, is itself a cause of preterm labour and in IVF twins. It is 23% more when compared to twins conceived naturally. With IVF singletons also there is nearly a two fold increase in preterm birth, which includes elective preterm birth also. Other causes include the underlying cause of infertility, placental dysfunction and infection. In twins, over distention of the uterus may be the cause of preterm labour.

A number of interventions have been tried over the past years to prevent preterm birth, like progesterone, bed rest, prophylactic tocolysis, cerclage etc., but no consistent data is available for preventive strategies in case of multiple pregnancies.

Evidence suggests that myometrial contractions causing preterm labour are caused by the release of inhibitory substances rather than the release of stimulants, in which progesterone plays a major role. Progesterone is released from corpus luteum in early pregnancy until the placenta takes over this function from 7-9 weeks of pregnancy. Progesterone may help in maintaining uterine quiescence in the latter half of pregnancy by limiting the production of stimulatory prostaglandins and inhibiting the expression of contraction- associated protein genes within the myometrium.

Progesterone has been used for prevention of preterm labour (PTL) in various clinical situations. Multiple trials have been done to examine the use of progesterone in various forms for the prevention of PTL. In the earliest RCT dated back to 1975, the authors found a protective effect of 17hydroxy-progesterone(17P) in prolonging the mean duration of pregnancy. In 1990, Professor Marc Keirse reported a significant reduction in the rate of preterm labor, preterm birth with progesterone prophylaxis, but it was still not significant. It was not until the year 2003, that two well designed RCTs were published, which brought back the interest in progestogens.

There is increasing evidence that progesterone supplementation can reduce the rate of spontaneous preterm birth in women with a prior spontaneous preterm birth. **Vaginal Progesterone administration has been shown to significantly reduce the rate of spontaneous preterm birth**

before 34 weeks in patients with a short cervix (≤15mm) on TVS between 16 to 24 weeks.

There is no evidence on the use of progesterone in women with positive fetal fibronectin. It is also not clear whether 17 hydroxy progesterone (17OHP) provides additional benefit to women with cerclage in situ. Women who had a previous episode of acute PTL in same pregnancy, experienced a reduced rate of PTL if they received 17P for the earlier episode.

Data from Cochrane suggests that for women with multiple pregnancies, the administration of progesterone (either IM or vaginal) does not appear to be associated with a reduction in risk of preterm birth or improved neonatal outcomes. They observed that 17OHP failed to prevent early preterm birth, even in those twin pregnancies with cervical shortening. In another RCT (Study of Progesterone for the Prevention of Preterm Birth in Twins [STOPPIT]), 500 cases of twin pregnancy were randomized to receive daily vaginal progesterone gel (90 mg) or placebo from 24 weeks through 34 weeks of gestation.The rate of adverse events did not differ between the two groups. This may be due to a different mechanism of action of PTL in multiple pregnancy i.e. excessive uterine stretch, which is different from that in singletons. A recent study showed that progesterone does not inhibit stretch-induced MAPK activation or gene expression in myometrial cells in vitro. In a sub analysis of the PREDICT study, women with twin pregnancies were randomized to daily treatment with progesterone or placebo pessaries from 20-24 weeks until 34 weeks gestation. This population consisted of high-risk pregnancies, defined by the finding of cervical length ≤ 10th centile at 20-24 weeks gestation or history of either spontaneous delivery before 34 weeks or miscarriage after 12 weeks. The primary outcome was delivery before 34 weeks. The study didn't find any significant differences. The PROGESTWIN study reported no difference in the gestational age of patients randomised to receiving placebo or 17-OHP but reported lower neonatal morbidity (19.1% OR 0.53, 95% CI 0.31-0.90; P=0.02) in the 17-OHP group with a significant reduction in respiratory distress syndrome, retinopathy of prematurity and culture-confirmed sepsis.

Optimal progesterone formulation, route of delivery and dose for prevention of PTL has not yet been determined. Synthetic progestins (MPA or norethisterone acetate) are not used for the same. Natural progesterone is available as powders, capsules, gels or injectables, and can be given vaginally orally or by injection. **The advantage of vaginal progesterone is its high uterine bioavailability, should be administered daily in the doses of 90 to 400 mg. 17OHP can be given intramuscular in weekly dosing ranging from 25mg to 1000mg.** FDA has approved the use of 17OHP for use in pregnancy. Micronized progesterone seems to be a superior choice over Dydrogesterone as per a few studies conducted in singleton pregnancies. However; there are no studies in twin pregnancies, conceived with ART.

Conclusion

Progesterone has been used to prevent preterm labour for decades. There is no evidence showing effectiveness in preventing preterm labour. However; there are reports demonstrating better neonatal outcomes which may justify the use of 17-OHP. Maybe there are certain other pathways besides uterine over distension through which patients may benefit from the use of progesterone, especially those who have conceived through ART.

Suggested Reading

1. Dodd JM, Grivell RM, OBrien CM, Dowswell T, Deussen AR. Prenatal administration of progestogens for preventing spontaneous preterm birth in women with a multiple pregnancy. Cochrane Database of Systematic Reviews 2017, Issue 10. Art. No.: CD012024. DOI: 10.1002/14651858.CD012024.pub2.
2. Second trimester cervical length and risk of preterm birth in women with twin gestations treated with 17-α hydroxyprogesterone caproate. Durnwald CP, Momirova V, Rouse DJ, Caritis SN, Peaceman AM, Sciscione A, Varner MW, Malone FD, Mercer BM, Thorp JM Jr, Sorokin Y, Carpenter MW, Lo J, Ramin SM, Harper M, Spong CY, Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network. J Matern Fetal Neonatal Med. 2010 Dec; 23(12):1360-4.
3. Progesterone for the prevention of preterm birth in twin pregnancy (STOPPIT): a randomised, double-blind, placebo-controlled study and meta-analysis.Norman JE, Mackenzie F, Owen P, Mactier H, Hanretty K, Cooper S, Calder A, Mires G, Danielian P, Sturgiss S, MacLennan G, Tydeman G, Thornton S, Martin B, Thornton JG, Neilson JP, Norrie J Lancet. 2009 Jun 13; 373(9680):2034-40.
4. Norwitz ER, Caughey AB. Progesterone supplementation and the prevention of preterm birth. Rev Obstet Gynecol. 2011;4(2):60-72
5. Norman JE, Bennett P (2017) Preterm birth prevention-Time to PROGRESS beyond progesterone. PLoS Med 14(9): e1002391.

Validated Screening Tools for assessing Emotional Wellbeing in PCOS Patients

The physical challenges faced by girls and women affected by PCOS are known to have an impact on their emotional wellbeing as well. In order to give an all encompassing treatment to our patients we not only need to assess their physical ailments, but also the emotional changes that the patient undergoes due to having such a complicated illness such as PCOS.

The recent International evidence – based guidelines for assessment and management of PCOS released in 2018 have recommended certain screening tools to assess the emotional wellbeing of PCOS patients. These are tools which the physician can use in his clinical practice to screen PCOS patients for conditions like Anxiety, Depression and Eating Disorders. If you wish to assess your patient anxiety levels and depression status or the presence of an eating disorder, you could evaluate your PCOS patients with the below given tools. Below mentioned are the links from where soft copies of these tools are readily available for you to use in your daily practice.

1 Tool for Assessing General Anxiety Disorder

Over the last two weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
Feeling nervous, anxious, or on edge	0	1	2	3
Not being able to stop or control worrying	0	1	2	3
Worrying too much about different things	0	1	2	3
Trouble relaxing	0	1	2	3
Being so restless that it is hard to sit still	0	1	2	3
Becoming easily annoyed or irritable	0	1	2	3
Feeling afraid, as if something awful might happen	0	1	2	3
Column totals	——— +	——— +	——— +	——— +
Total score	———————			

If you checked any problems, how difficult have they made it for you to do your work, take care of things at home, or get along with other people?

- ☐ Not difficult at all
- ☐ Somewhat difficult
- ☐ Very difficult
- ☐ Extremely difficult

Source: Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PRIME-MD-PHQ). The PHQ was developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke, and colleagues. For research information, contact Dr. Spitzer at ris8@columbia.edu. PRIME-MD® is a trademark of Pfizer Inc.

Scoring for Anxiety Severity

This is calculated by assigning scores of 0, 1, 2, and 3 to the response categories, respectively, of "not at all," "several days," "more than half the days," and "nearly every day." GAD-7 total score for the seven items ranges from 0 to 21.

0–4 : minimal anxiety
5–9 : mild anxiety
10–14 : moderate anxiety
15–21 : severe anxiety

Download a copy of this tool from:
https://adaa.org/sites/default/files/GAD-7_Anxiety-updated_0.pdf

Source: Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PRIME-MD-PHQ). The PHQ was developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke, and colleagues

Spitzer, Robert L.; Kroenke, Kurt; Williams, Janet B.W.; Löwe, Bernd (22 May 2006). "A brief measure for assessing generalized anxiety disorder: The GAD-7". Archives of Internal Medicine. 166 (10): 1092–7. doi:10.1001/archinte.166.10.1092. PMID 16717171.

2 SCOFF Screening Tool for Eating Disorders

These questions may be used to explore the possibility of whether someone might be experiencing an eating disorder. The tool is not intended for making a diagnosis, however highlights those who may require further investigation.

1. **Do you ever make yourself sick (vomit) because you feel uncomfortably full?**
2. **Do you worry you have lost control over how much you eat?**
3. **Have you recently lost more than one stone (approx 6 Kg) in a three month period?**
4. **Do you believe yourself to be fat when others say you are too thin?**
5. **Would you say that food dominates your life?**

Each positive response (yes) is given 1 point. A score of 2 or more indicates a possible eating disorder and warrants further exploration.

Luck, A.J., Morgan, J.F., Reid, F., O'Brien, A., Brunton, J., Price, C., Perry, L., Lacey, J.H. (2002), 'The SCOFF questionnaire and clinical interview for eating disorders in general practice: comparative study', British Medical Journal, 325,7367, 755 - 756.

Download a copy of this tool from:
http://www.cedd.org.au/hne/other/scoff_questionnaire.pdf

Source: Luck, A.J., Morgan, J.F., Reid, F., O'Brien, A., Brunton, J., Price, C., Perry, L., Lacey, J.H. (2002), 'The SCOFF questionnaire and clinical interview for eating disorders in general practice: comparative study', British Medical Journal, 325,7367, 755 - 756.

3 Tool for Screening Depression Patient Health Questionnaire (PHQ-9)

Name Date

Over that last 2 weeks, how often have been bothered by any of the following problems?
(use P to indicated your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things				
2. Feeling down, depressed, or hopeless				
3. Trouble falling or staying a sleep, or sleeping too much				
4. Feeling tired or having little energy				
5. Poor appetite or overeating				
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down				
7. Trouble concentrating on things, such as reading the newspaper or watching television				
8. Moving or speaking so slowly that other people could have noticed. Or the opposite - being so figety or restless that have been moving around a lot more than usual				
9. Thoughts that you would be better off dead, or of hurting yourself				
	Add columns	+	+	
(Healthcare professional: for interpretation of TOTAL, please refer to accompanying scoring card.)	TOTAL			

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all — Somewhat difficult

Very difficult — Extremely difficult

How to interprate PHQ-9 Patient Depression Questionnaire

For initial diagnosis:

1. Patient completes PHQ-9 Quick Depression Assessment.
2. If there are at least 4 P in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider Major Depressive Disorder

- if there are at least 5P in the shaded section (one of which corresponds to Question #1 or #2) Consider Other Depressive Disorder
- if there are 2-4 P in the shaded section (one of which corresponds to Question #1 or #2)

Note: Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient.

Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

1. Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.
2. Add up Ps by column. For every P: Several days = 1 More than half the days = 2 Nearly every day = 3
3. Add together column scores to get a TOTAL score.
4. Refer to the accompanying PHQ-9 Scoring Box to interpret the TOTAL score.
5. Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9

For every P Not at all = 0; Several days = 1; More than half the days = 2; Nearly every day = 3

Interpretation of Total Score

Total Score	Depression Severity	Total Score	Depression Severity
1-4	Minimal depression	5-9	Mild depression
10-14	Moderate depression	15-19	Moderately severe depression
20-27	Severe depression		

Download a copy of this tool from:
https://www.uspreventiveservicestaskforce.org/Home/GetFileByID/218

Source: The PHQ-9 is adapted from the Primary Care Evaluation of Mental Disorders (PRIME-MD) developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues with an educational grant from Pfizer Inc. For research information, contact Dr. Spitzer (link at rls@columbia.edu). No permission is required to reproduce, translate, display or distribute the Patient Health Questionnaire (PHQ)

THE PCOS® SOCIETY INDIA

5th International Annual Conference of the PCOS Society of India

THE INTERNATIONAL CONFERENCE

PCOS- BEST OPTIONS FOR BEST OUTCOMES

Dates

7th-9th August 2020

Venue

ITC Gardenia, Bengaluru

Dear Friends and Colleagues,

Greetings from "**The PCOS Society of India!**"

It gives us great pleasure in inviting you to participate in the forthcoming 5th International Conference "**PCOS–Best Options for Best Outcomes**" organized by "**The PCOS Society of India**" to be held in **Bengaluru on 7th, 8th and 9th August 2020**.

The Conference will be preceded by **4 Pre-Congress Workshops on Friday, the 7th of August 2020** focussing on important issues affecting PCOS women. **The Conference will be held on the 8th & 9th of August and will deliberate on Practice Pathways in PCOS in all walks of life of a woman.** It will be a state of the art meeting which will incorporate the latest advances and evidence based data with special emphasis on the challenges in the Indian context.

This Meeting will provide a platform for clinicians to exchange information and multidisciplinary treatment strategies in PCOS. Eminent International and National speakers from different disciplines of Medicine who manage PCOS patients, will be invited to add a lot of value to the understanding of this very complicated Syndrome.

We look forward to a fantastic experience of learning and translating our knowledge into clinical practice.

We look forward to seeing you in beautiful Bengaluru.

Dr. Duru Shah
Congress President

Dr. Madhuri Pati
Organizing Chairperson

Day 1 – 7th August, 2020 – Pre-congress Workshops

Time	Hall A	Hall B
10.00 am-2.00 pm	**Workshop 1** **Ovulation Induction in PCOS - Overcoming Challenges**	**Workshop 2** **Healthy Living – Conquering PCOS**
Session 1	**Better Pretreatment**	**Impact of nutrition, diet and environment in PCOS – Scientific Evidence**
10.00 am	Impact of treatment in the prestimulation phase	Risk factors for obesity & preventing obesity
10.15 am	*Case Presentation and Discussion*	Eating disorders in PCOS
10.30 am	Optimizing Ovulation Induction Protocol	Preventing PCOS in the next generation
10.45 am	*Case Presentation and Discussion*	*Discussion*
11.00-11.30 am	**Coffee Break**	
Session 2	**Better Stimulation**	**From Research to Implementation**
11.30 am	Poor response to ovulation induction – How should it be addressed?	Intermittent fasting in PCOS – A logical intervention
11.45 am	*Case Presentation and Discussion*	Role of Nutraceuticals in diet
12.00 noon	Versatility of LH activity for COH in high responders	The Ideal PCOS diet
12.15 pm	*Case Presentation and Discussion*	*Discussion*
Session 3	**Better Luteal Phase Support**	**Approach to fitness for PCOS**
12.30 pm	Individualized Luteal Phase Support (ILPS)	Yoga in PCOS
12.45 pm	Case Presentation and Discussion	Weight loss in obese PCOS
1.00 pm	The impact of adjuvant treatments in luteal phase	Strength training in lean PCOS
1.15 pm	*Case Presentation and Discussion*	*Discussion*
1.30 pm	**Open House**	**Open House**
2.00-3.00 pm	**Lunch and Visit to Trade Exhibition**	
3.00 – 7.00 pm	**Workshop 3** **Improving pregnancy success in PCOS**	**Workshop 4** **Tackling the Pregnant PCOS**
Session 1	**Increasing efficiency and preventing complications**	**Common Pregnancy Problems**
3.00 pm	Ovarian drilling – Current evidence	Are PCOS patients more prone to early pregnancy loss?
3.15 pm	*Case Presentation and Discussion*	Is there an ideal nutrition and weight gain in PCOS pregnancy?
3.30 pm	COS in hypogonadotropic hypogonadism with PCOM	Pregnancy after gastric bypass: Are there any surgery related complications to the fetus?
3.45 pm	*Case Presentation & Discussion*	*Discussion*
4.00 – 4.30 pm	**Coffee Break**	
Session 2	**Optimizing Outcomes**	**Gestational diabetes mellitus (GDM)**
4.30 pm	Factors affecting ART success: Obesity, androgens, insulin, LH	Diagnosis
4.45 pm	*Case Presentation and Discussion*	Continuous glucose monitoring: A new tool for diabetes in pregnancy
5.00 pm	PCOS & ART – Preventing Complications	Insulin management made simple in pregnancy
5.15 pm	*Case Presentation & Discussion*	*Discussion*
Session 3	**Improving LBR**	**Near Term and Post Delivery**
5.30 pm	Factors affecting implantation	Pregnancy Induced Hypertension (PIH) in PCOS
5.45 pm	*Case Presentation and Discussion*	Intra-partum Management of PIH
6.00 pm	Overcoming Implantation failure – Freeze all Policy	Post-partum Management of PIH
6.15 pm	*Case Presentation & Discussion*	Neonatal Management of GDM and PIH
6.30 pm	PCOS and clinical pregnancy loss	*Discussion*
6.45 pm	*Case Presentation and Discussion*	
7.00 pm	**Close of Session**	

Day 2 – Saturday 8th August 2020

Sessions	Time	Topic
Session 1	**9.30-11.00 am**	Role of "AMH"
	9.30 am	PCOM Check: A Novel Approach to Diagnose Women with PCOS **– Dr. Ajay Kumar**
	9.50 am	Role of AMH in assessing hyperandrogenemia **– Prof. Elisabet-Stener-Victorin**
	10.10 am	*Discussion*
	10.30 am	**Keynote address** – Role of AMH in predicting fertility outcome in PCOS women **– Prof. Anuja Dokras**
	11.00-11.30 am	**Coffee Break**
	11.30-12.30 pm	**Inauguration**
Session 2	**12.30 pm**	**Keynote address** Does PCOS begin in the fetus? **Prof. Elisabet Stener-Victorin**
	1.00-2.00 pm	**Lunch and Visit to Trade Exhibition**
Session 3	**2.00-3.00 pm**	**Treatment of Cosmetic Issues**
	2.00 pm	Acne
	2.15 pm	Alopecia
	2.30 pm	Acanthosis nigricans and skin tags
	2.45 pm	*Discussion*
Session 4	**3.00-4.30 pm**	**Dealing with co-morbidities in PCOS**
	3.00 pm	Significance of "fatty Liver"
	3.15 pm	Assessing Cardiovascular risks
	3.30 pm	Sleep Apnea – often forgotten
	3.45 pm	Hyperandrogenic PCOS and increased libido
	4.00 pm	*Discussion*
	4.30-5.00 pm	**Coffee Break**
	5.00-6.00 pm	**Live Quiz**
	6.00-7.00 pm	**Annual General Body Meeting**
	7.00-8.30 pm	**Posters**
	8.30 pm onwards	**Entertainment, Cocktails & Dinner**

Day 3 – Sunday 9th August, 2020

Sessions	Time	Topic
Session 5	**8.00-9.00 am**	**Invited Papers selected from posters received**
Session 6	**9.00-10.30 am**	**PCOS beyond Menopause**
	9.15 am	Endometrial hyperplasia
	9.30 am	Post-menopausal hormone therapy in PCOS – A safe choice?
	9.45 am	Androgenic influence on female bone, a complex issue
	10.00 am	*Discussion*
Session 7	**10.30 am**	**Keynote address** – Is hirsutism a marker of metabolic ysfunction? **– Dr. Ricardo Azziz**
	11.00-11.30 am	**Coffee Break**
Session 8	**11.30-12.30 pm**	**Endocrine disorders and PCOS**
	11.30 am	Hypothyroidism and PCOS: a common combination
	11.50 am	PCOS and Non-Classical Congenital Adrenal Hyperplasia: distinctions and commonalities
	12.10 pm	Hyperprolactinemia and PCOS: Is evaluation warranted
	12.30 pm	*Discussion*
Session 9	**12.30-1.30 pm**	**Medications in PCOS**
	12.30 pm	Metformin
	12.45 pm	Inositols
	1.00 pm	Anti-obesity drugs: Past, present and future
	1.15 pm	*Discussion*
	1.30 pm	**Lucky Draw and Valedictory**
	2.00 pm	**Lunch and Visit to Trade Exhibition**

In view of the current COVID-19 situation, the conference may be postponed to a later date.

International Faculty

Prof. Elisabet-Stener-Victorin
PhD

- Professor in Reproductive Physiology at Karolinska Institute, Sweden
- President of the Androgen Excess and PCOS Society (AE-PCOS)

Dr. Ricardo Azziz
MD, MPH, MBA

- Currently CEO, the American Society for Reproductive Medicine (ASRM) Founding
- Executive Director of the Androgen Excess and PCOS Society (AE-PCOS)

Prof. Anuja Dokras
MD, PhD

- Professor of Obstetrics and Gynecology at the Hospital of the University of Pennsylvania
- Director-at-Large of the Androgen Excess and PCOS Society (AE-PCOS)

Dr. Ajay Kumar
PhD

- Director Operations at Ansh Labs, Houston, Texas, USA
- PhD in Enzyme Catalyzed Polymerization, University of Massachusetts Lowell

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*A Misra et al, JAPI Ÿ VOL. 57 Ÿ FEBRUARY 2009
Vittorio Unfer, et al, International Journal of Endocrinology, Volume 2016

1. Hormone Molecular Biology and Clinical Investigation. 2018; 20170067
2. ALESSANDRO D. GENAZZANI et.al Gynecological Endocrinology, 2012; 28(12): 969–973 (2)
3. Evidence Based Women's Health Journal 2015, 5:61–66 (3)

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