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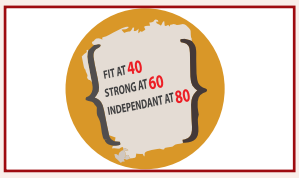
## Newsletter

October 2018 | Issue 10







# "MIDLIFE"


## President's Message

### Dear FOGSIans

### Greetings!

Greetings and best wishes. Remember this beautiful song, when we were young, one of my favourite and it goes,

When I was just a little girl
I asked my mother, what will I be
Will I be pretty
Will I be rich
Here's what she said to me
Que será, será
Whatever will be, will be
The future's not ours to see
Que será, será
What will be, will be…

There are many things probably one can leave on God, but with longevity increasing and more and more women living much beyond menopause and many longterm implications of menopause now becoming a reality.It is high time that we focus on building future good health and not leave on whatever will be. This month is dedicated towards Midlife and its management and we have had a wonderful South zone Yuva conference on 30 solutions to 30 plus problems,organised by Vijaywada team under the able leadership of Dr Jayam Kannan and Dr Sasibala and her amazing team members from Vijaywada society and attended by more than 700 young gynaecologists from all over. Friends, we are definitely living longer and the reality is that in our country we are still struggling to create awareness and access about geriatric health, non communicable diseases are on the rise and today more than 60% of us are succumbing to them and many of them are preventive or can be detected early for a better management.

*"God, middle age is an unending insult."*

Dorothea Benton Frank, Sullivan's Island

And others say life begins at Forty, it is how you look at it, a glass half empty or half full. I would urge all of our members to look after their health, especially 35 plus and spread the knowledge to public through forums, interactions so that prevention and early diagnosis becomes the dictum. We should engage in positive healthy lifestyle and an yearly health checkup for ourselves and also promote to our beneficiaries too,so as to decrease the disease burden on families and our country. Today we have reached a stage where our Government is also rolling out many schemes for our population and it is our responsibility to make women aware and encourage them to take charge of their bodies in a more empowered way so that tomorrow we are " Fit at Forty, strong at sixty and independent at eighty".

Looking forward to seeing you all at Rio for the next FIGO, where our beloved Dr C.N Purandare finishes a spectacular tenure as President FIGO and I will be in election for Vice President FIGO with six candidates from all over the world. Need your best wishes and support and I promise, I will keep on striving for womens' health at all available opportunities and platforms. Long live FOGSI.

Warm regards
Lots of Love
*Om Shanti*
**Jaideep Malhotra**

# UPCOMING

# Result of FOGSI - Awards & Prizes 2018

## FOGSI - Society Awards – 2018

Sr. No. | Name of Awards | Winners

1 FOGSI - President's Rotating Trophy-2017 (April 1, 2017 to March 31, 2018)
1. "A" Category - Delhi Society
2. "B" Category - Yavatmal Society
3. "C" Category - Hassan Society

2 FOGSI - Dr. D. K. Tank Reproductive Health Care Promotion trophy-2017 (April 1, 2017 to March 31, 2018)
1. "A" Category - Jabalpur & Mumbai Society (TIE)
2. "B" Category - Yavatmal Society
3. "C" Category - Sagar Society

3 FOGSI - Dr. Sadhana Desai Population Stabilization promotion prize-2017 (April 1, 2017 to March 31, 2018)
1. "A" Category - Jabalpur Society
2. "B" Category - Yavatmal Society
3. "C" Category - Sagar Society

4 FOGSI - Dr. Duru Shah Youth Trophy 2017 (April 1, 2017 to March 31, 2018)
1. "A" Category - Thrissur Society
2. "B" Category - Amravati Society
3. "C" Category - Sagar Society

5 FOGSI - Dr Chitrathara & Dr Gangadharan Preventive & Research Oncology Award 2017 (April 1, 2017 to March 31, 2018)
1. "A" Category - Thrissur Society
2. "B" Category - Yavatmal Society
3. "C" Category - Deoli- Sawangi Society

6 FOGSI-Mylan Smriti Award for Save the Girl Child 2017 (April 1, 2017 to March 31, 2018)
1. "A" Category – Cochin Society
2. "B" Category – Cannanore Society
3. "C" Category - Vapi Society

## FOGSI - Individual Awards – 2018

Sr. No. | Name of Awards | Winners

1 FOGSI - Dr. Mehroo Dara Hansotia prize for the best work done by Committee of FOGSI 2018
Clinical Research Committee –
Dr. A. Charmila Trichy,

2 FOGSI- Dr. Vasantben Shah Scholarship for Overseas Study 2018
Dr. Apurba Kr Dutta, Jharkhand

3 FOGSI-Travelling fellowship 2018 (2 fellowships)
Dr. Shivani Barala, Jaipur
Dr. Mansi Shukla, Indore

4 FOGSI-Late Dr. Pravin Mehta training fellowship in Laparoscopy 2018
Dr. Soumil Trivedi, Mumbai

5 FOGSI-IAEC Sun International Travelling Fellowship 2018
Dr. K. Aparna Sharma, Gurgaon

6 FOGSI-Dr.Duru Shah Distinguished Community Service award 2018
Dr. Ranjana Gupta, Jabalpur

7 FOGSI-Dr. R D Pandit Research Prize 2018
Dr. Ankita Maheshwari, New Delhi

8 FOGSI-Dr. Kumud P Tamaskar Prize 2018
Dr. Shally Gupta, Uttar Pradesh

9 FOGSI-Dr. D C Dutta prize 2018 for best publication
1. Text Book (A): No suitable application
2. Hand Book (B): Dr. Richa Baharani, Jabalpur
3. FOGSI FOCUS (C): Dr. Nandita Palshetkar & Dr. Pratik Tambe, Mumbai

10 FOGSI-Dr. Kamini A. Rao orator for the year 2018
East Zone : Dr. Priyankur Roy, Siliguri Society
West Zone : Dr. Gaurav Desai, Mumbai Society
North Zone : Dr. Swati Agrawal, Delhi Society
South Zone : Dr. Anurekha J. P.,Salem Society

11 FOGSI-The Padmabhushan Kamlabai Hospet Award 2018
Dr. Richa Sharma, Ghaziabad

12 FOGSI-Late R. B. Dr. S. N. Malhotra appreciation award 2018
Dr. Jayantibhai Ishwarbhai Patel, Baroda

13 FOGSI Corion awards 2018
Senior Category:
Winner: Dr.Shalini Rajaram, Delhi
1st Runner up: Dr. Sharda Patra, Delhi
2nd Runner up: Dr. Sanjay Patel, Ahemdabad
Junior Categroy:
Winner: Dr. Alpana Singh, Ghaziabad & Dr. Mriganka Mouli Saha, Bengal
1st Runner up: Dr. Rohan Palshetkar, Mumbai
2nd Runner up: Dr. Ruchika Garg, Agra

14 FOGSI-Imaging Science Award 2018 (2 awards)
Dr. Neharika Malhotra, Agra
Dr. Nilanchali Singh, Delhi

15 The FOGSI, IPAS, Young Talent Promotion Committee and MTP Committee Award 2018
Dr. Kavita Agarwal, Delhi

16 FOGSI-Dr. Nimish R. Shelat Research Award 2018
Dr. Anjali Chaudhary (Verma)

18 FOGSI-Late Prof. D. Kutty Life Time Achievement Award 2018
Dr. Rajnikant Contractor, Ahemdabad

19 FOGSI – Mr. N. A. Pandit & Mrs. Shailaja N. Pandit Women's Empowerment Award 2018. (2 awards) Dr. Sujata Sanjay, Uttarakhand
Dr. Gracy Thomas, Kerala

20 FOGSI-Dr. Shanti Yadav Award in Infertility (3 awards)
Winner : Dr. Rana Chaudhary (Khan), Mumbai
1st Runner Up: Dr. Diksha Goswami Sharma, Agra
2nd Runner Up: Dr. Ritu Hinduja, Mumbai

21 FOGSI- Dr. Rajat Ray Award in Fetal Medicine (3 awards)
Winner : Dr. Mansi Shukla, Indore
1st Runner Up: Dr. T. Radha Bai Prabhu, Chennai
2nd Runner Up: Dr. Manisha Kumar, New Delhi

22 Winner of the best paper published in FOGSI Journal during the year 2018 in Open Category. (3 awards)
1st Prize: Dr.Pikee Saxena, Delhi
2nd Prize: Dr. H.K.Chaudhari, Mumbai
3rd Prize: Dr.Tushar Kar, Odisha

23 Winner of the best paper published in FOGSI Journal during the year 2018 in Junior Category. (3 awards)
1st Prize: Dr. Leena Rose Johnson, Trivandrum
2nd Prize: Dr. Punit Hans, Patna
3rd Prize: Dr. Nupur Shah, Baroda

***Team 2018 Wishes Congratulations to all***

# Tarot for October 2018

**Aries:** Good month, acquisition of assets or luxuries, month of fulfilment, whatever your desires are this is the time for them to get fulfilled. Marriage, promotion, if you are planning a baby this is the time.

**Taurus:** Increase in income, start of a new project. Promotion on the cards, great month work wise, good health and happy times.

**Gemini:** You need to make a balance between work and personal life, do not neglect your health. Work will be very demanding, some stress indicated at the domestic front.

**Cancer:** Expect favours from women in power, if you have a female boss expect promotion and raise.

You will have a great time with family and friends, enjoyment and good health indicated.

**Leo:** Good month for people born under this sign, you have the Midas touch this month, make the best, lady luck smiles, good things coming your way.

**Virgo:** This month brings in lots of confusion and crossroads, be cautious take your steps carefully, do not take impulsive decisions. Health might be a cause of concern, gear up for a stressful month ahead.

**Libra:** Hard work not reaping benefits, you might not get credit for something you have worked hard for. Be careful and warned against thefts and back stabbing.

**Scorpio:** Lots of hard work will go in to achieving what you want to, but the good news is the hard work will reap rich dividends. Travel on the cards. some celebration in the family.

**Saggitarius:** Travel on the cards, if wanting a change of place it is likely to happen. transfer on the cards. Good health.

**Capricorn:** You will face stiff competition from your colleagues, be careful about what you say to people around. This is the month to lie low.

**Aquarius:** Financial gains, promotion, celebration, good month for Aquarians, lady luck smiling on you, good health indicated.

**Pisces:** Financial gain is indicated, friends will be helpful, you will be centre of attraction, work will be rewarded. Some mental anxieties and stress indicated.

Rest is in the hand of God, have a blessed October.

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

## Few Important Links


- https://www.medicalnewstoday.com/articles/155651.php
- https://www.healthline.com/health/menopause/symptoms-signs
- https://www.menopause.org/.../menopauseflashes/menopause-symptoms.../are-we-ther..
- https://www.healthline.com/health/menopause/menopause-facts
- https://www.webmd.com › Menopause › Guide
- https://timesofindia.indiatimes.com/life-style/health...menopause-on.../36665763.cms
- https://www.psychologytoday.com/us/conditions/midlife
- https://www.mindtools.com › Career Skills › Dealing with Challenges
- https://en.wikipedia.org/wiki/Midlife_crisis
- https://www.endocrineweb.com/conditions/menopause/menopause-complications
- https://www.womenshealth.gov/menopause/menopause-treatment
- https://www.ncbi.nlm.nih.gov/pubmed/19586429
- the-hospitals.com/.../Current-and-Recent-Advances-in-Management-of-Menopause.-5
- https://www.independent.co.uk/topic/menopause
- https://www.omicsonline.org/womens-health/articles-on-menopause.php
- www.ijrcog.org/index.php/ijrcog/article/download/2332/2281
- www.imsociety.org/manage/images/pdf/.../a8124974c94bac19396a0917c914ebc0.pd
- https://timesofindia.indiatimes.com › ... › Early menopause on the rise, say experts


Professor Dr S Sampathkumari

***" It's never too early or too late to work towards being the HEALTHIEST you"***

# South Zone Yuva FOGSI on Midlife at Vijayawada

# Recent Advances in Assisted Reproductive Technology

Dr Seema Pandey, Miss Naintara Lucien

In 1978, the world witnessed the birth of the first "test tube baby" Louse Brown. Since then the field of assisted reproductive technology is rapidly progressing with many new advances. Technological advances being developed and perfected currently hold the potential to change the field of ART in still more dramatic and exciting ways well into the future. The present short review discusses some of the very important advances in last few years.

- **Laboratory Advances:**

Probably the single most significant factor in the dramatic advances has been the technological modifications in the embryology laboratory.

"From cryopreservation to slow vitrification."

- **Time-lapse imaging (TLI)**

It has emerged as a novel technology that enables continuous evaluation of early embryo development by automated image acquisition.

- **The discovery of ICSI**- The biggest breakthrough- which has changed and is ruling the field of ART since 1992.

Pre-implantation genetic screening/pre-implantation genetic diagnosis.

**PGS** is another important advancement. The recent technological advances in preimplantation genetic testing suggest that there will be a wider implementation of PGD/PGS in the future.

- Successful genetic diagnosis of single gene defects through blastomere biopsy, or preimplantation genetic testing (PGT), was first reported by Alan Handy side and the team at Hammersmith Hospital in London in 1989.
- Sequencing of human genome
- **Gene editing**- the development of novel and highly efficient DNA editing tools such as CRISPR/Cas9 systems allow for fast, inexpensive, and precise gene editing.
- **HLA matching**- effective in RIF and recurrent miscarriages.

New approaches to assess the receptivity of the endometrium Concept of window of implantation and endometrial receptivity testing (ERA)-

It includes Ultrasound assessment of endometrial receptivity in the form of endometrial thickness, color-flow mapping and volume hysteron-angiogram along with Molecular test of endometrial receptivity.

- **Artificial Womb**- to fight the neonatal mortality and morbidity due to extreme prematurity until now, efforts to extend gestation using extracorporeal systems have achieved limited success. Scientist now have reported the development of a system that incorporates a pump less oxygenator circuit connected to the fetus of a lamb via an umbilical cord interface that is maintained within a closed 'amniotic fluid' circuit that closely reproduces the environment of the womb.
- **Ectogenesis**- the invention of a complete external womb, could completely change the nature of human reproduction. Researchers at the Children's Hospital of Philadelphia announced their development of an artificial womb. The "biobag" as it is known, is intended to improve the survival rates of premature babies and is a significant step forward from conventional incubators.
- **Artificial gametes**- A potential future treatment alternative to using donor gametes is the use of so-called 'artificial gametes', i.e. gametes generated by manipulation of their progenitors or of somatic cells, which would allow children who are genetically related to both their parents to be conceived.
- **Artificial oocyte activation (AOA)**

It is an effective method to avoid total fertilization failure in human *in vitro* fertilization-embryo transfer (IVF-ET) cycles. In the IVF laboratory, artificial oocyte activation (AOA) and PF can be used in cases of male factor infertility.

- **Artificial Sperm**

Azoospermia, the absence of any sperm cells from the ejaculated semen, poses a real challenge to the fertility urologist.

**Stem Cell Therapy**- Stem cells are characterized by their ability to self-renew and to differentiate into multiple different cell types and tissues. Stem cells are generally considered as being embryonic or non-embryonic in origin. Sufficient endometrial growth is fundamental for embryo implantation.

- **3-party reproduction (mitochondrial transfer)**- helpful in fighting many congenital life threatening diseases.

Discovery of long acting gonadotropins- lesser injections, happier patients.

- **In vitro maturation**- a boon for PCOS and fertility preservation patients.
- **TESE/micro-TESE**- for male factor infertility.
- **Fertility preservation procedures**- oocyte cryopreservation, ovarian tissue transplantation, embryo freezing etc.

# Controversy About the use of Sildenafil Citrate in Pregnancies with FGR and/or Oligohydramnios

Dr Deepa Kala, Dr Preeti D Chhallani, Dr Amit Agrawal

The molecule UK-92-480, later known as sildenafil, was synthesized and brought forth for clinical trials in 1991 after promising animal studies showed that sildenafil induced coronary artery dilatation. Early human trials in 1991 and 1992 established that sildenafil was not promising as an antianginal drug; however, as an "adverse event" in the trials, men were reporting an erectogenic effect from the medication. In late 1993, the first study of sildenafil for the treatment of erectile dysfunction (ED) was so successful. By the time the manufacturer was ready to submit to the US. Food and Drug Administration (FDA) on September 29, 1997, over 4500 men had been tested—far more than the average number tested in the course of a typical drug development.(1) The safety of sildenafil has been established in many pre- and post approval studies at doses as high as eight times the maximum recommended dose in Erectile dysfunction.

**Mechanism of action:** Sildenafil works as a competitive inhibitor of an enzyme of the phosphodiesterase type five (PDE-5). PDE-5 is found in the corpus cavernosum, platelets, skeletal muscle, and vascular and visceral muscle. The mechanism of action in involving nitric oxide prompted many animal studies for other potential uses like FGR and oligohydramnios in obstetrics and gynaecology.

The RAFT 2011 study data suggested that Sildenafil treatment may offer a new opportunity to improve perinatal outcomes for women whose pregnancies are complicated by severe early-onset IUGR.(3) The planned STRIDER (Sildenafil TheRapy In Dismal prognosis Early-onset intrauterine growth Restriction) Pilot Trial was designed to be the next step in addressing this issue. Plans were made to secure funding to maintain contact with the children for neurodevelopmental follow-up at 5 years of age. Pending the funding of the STRIDER Pilot Trial, a Sildenafil for IUGR Registry was maintained through the Motherisk Program, Hospital for Children, Toronto, ON, Canada.

A 2017 systematic review by L. Dunn et all evaluates maternal tolerance and obstetric and perinatal outcomes following sildenafil citrate (SC) use in human pregnancy. An online database search for all relevant publications from the past 30 years was undertaken by the authors and institutional research librarian in July 2016. Databases included Scopus, PubMed, Cochrane Library, Web of Science, Embase, and Google Scholar. The final number of publications included for analysis in this systematic review was 16, comprising 165 pregnancies in total. These included 4 RCTs, 1 non-RCT, 1 case-controlled, 1 cohort, 4 case series, and 5 case reports. No significant differences between the SC and placebo groups were found in terms of cord blood ph, nneonatal intensive care admissions or stillbirth and neonatal death rate. However no increase in congenital anomalies was also found.(4)

STRIDER: Sildenafil Therapy In Dismal prognosis Early-onset intrauterine growth Restriction–a protocol for a systematic review with individual participant data and aggregate data meta-analysis and trial sequential analysis. Trials were expected to end in 2016-2017. Data analyses of individual trials are expected to finish in 2019. Given the pre-planned and agreed IPD protocol, these results should have been available in 2020. But the Dutch STRIDER trial has been suspended .The Dutch STRIDER trial had a primary outcome of intact infant survival until hospital discharge.The decision to halt this trial was made following a planned interim analysis conducted by an independent data and safety monitoring committee, which concluded the following:

- There was a potential signal of harm relating to an increased incidence of persistent pulmonary hypertension of the newborn and a non-significant trend towards an increase in neonatal death (but not stillbirth).
- There was likely futility of the trial to show a significant beneficial effect in the primary outcome: a composite of mortality and major neonatal morbidity at hospital discharge.

Given these two facts of possible (but currently unproven) harm and likely lack of benefit, the decision was made to stop the trial, to allow detailed review and validation of the findings before any further exposure of women and their fetuses to sildenafil. The other completed STRIDER trials in the UK10 and New Zealand/ Australia (reported and submitted for publication), using almost identical methods, did not find any beneficial effect of sildenafil therapy in FGR, but also found no evidence of an association with persistent pulmonary hypertension of the newborn or neonatal death. These findings are of concern and are being taken very seriously.

The 2018 revised information on Sildenafil at the FDA and the manufacturer website also says that it is to be used with caution in pregnancy and not to be used in lactation and paediatric age group.

Though the safety of Sildenafil has been established in ED in males, its use in females remains controversial. Another thing to consider is that in ED, it is used only 5-6 times a month while in FGR or other types of complicated pregnancies, we may need a higher and long term dose. Also it is not that the drug is without any side effects.

**As per the reviewed literature, we should refrain from prescribing Sildenafil during pregnancy till further reports about its efficacy and safety are available.**

# Yes, I Can Do It!!

Dr Piyush Malhotra

*"No Matter How you feel, get up, dress up, show up and never give up"*

*Anonymous*

The concept of self-confidence is commonly used as self-assurance in one's personal judgment, ability, power, etc. One increases self-confidence from experiences of having mastered particular activities. It is a positive belief that in the future one can generally accomplish what one wishes to do. Teenagers are confronted with a variety of tough issues, and learning how to deal with them can test their confidence. Tough issues range from dealing with changes to their physical appearance to being accepted in friendship groups. This is then reflected in how they behave in public, how well they perform in school and other areas of their life, and family expectations. By becoming more accepting of themselves, teenagers become better equipped to deal with hurtful things that may damage their self-confidence.

The two most common self-confidence drops seen during adolescence are at the beginning, in Early Adolescence (9-13) when separating from childhood, and at the end, in Trial Independence (18-23) when leaving home to operate more on one's own terms.

At these first and last stages of adolescence, as the scope of life enlarges, the young person typically feels diminished in a number of ways. As the challenges of growth become more complex, they feel relatively more uncertain. As they spend more time away from family, they feel relatively less secure. As they must deal with more unknowns, they feel relatively more ignorant. As they dare more risky decisions and make more costly mistakes, they feel relatively less experienced. As they must rely more on themselves and less on parents, they feel relatively more anxious.

This is why a confident child does not automatically become a confident adolescent. It is why a confident high school student can lose that confidence in college, at least at first. It is why young people are often drawn to a peer who exhibits a lot of confidence—a formal or informal leader to follow in hopes of catching some of this empowering trait by social association. It is why peer groups become so alluring. Belonging to a collective creates welcome social assurance when individual confidence is low.

Of course, like any psychological trait, carried to excess, self-confidence can have its own downside. Whether in a willful adolescent or a dictatorial parent, when confidence in correctness or control becomes wed to sense of entitlement or certainty, arrogance is born. Now others can find it hard to get along with someone who believes she or her always knows best, is right and never wrong, and expects people to defer to that.

## Why is self-confidence important for teenagers?

Self-confidence is the belief that you'll be successful in a particular situation or at a specific task. Your child's self-confidence is related to their self-esteem, which is feeling good about yourself and feeling that you're a worthwhile person. But, having high self-esteem doesn't mean you always feel confident. Self-confidence can vary throughout life, particularly during major life changes such as adolescence. It's estimated that up to half of adolescents will struggle with low confidence levels during the early teenage years. Self-confidence helps teenagers make safe, informed decisions. Confident teenagers can avoid people and situations that aren't necessarily right for them, and to find those that are.

## What does positive self-confidence look like?

There are signs you can look out for to tell if your teenager is self-confident. These include:

- Good posture
- A relaxed walk
- Alert eyes
- An ease at both giving and receiving praise
- Openness to criticism and feedback
- A curiosity about new ideas
- A refusal to get upset when things go differently than planned.

## What are the signs of low self-confidence?

There are some things that you can look out for that may indicate that your child is lacking confidence. These include:

- An awkwardness accepting praise
- Unconfident body language, such as walking with their head down and reluctance to make eye contact
- Negativity about others and avoidance of social situations
- Not joining in on activities
- Holding back in class
- Being shy or timid
- A willingness to succumb to peer influence
- An expectation that they will fail at things they try, or to not try as hard when things get tricky.

For this reason, the nature and management of confidence is a topic worth discussing with their teenager: how it can be built, how it can be lost, and how it can be recovered. What follows is an oversimplified explanation to help get this conversation started.

Consider three possible contributors to self-confidence. Confidence can be built on FAITH: "I believe I can." It can be created by EFFORT: "I will keep trying." And it can arise from OUTCOME: "I will use what results to affirm or adjust my approach." Take these components one at a time.

## FAITH

A lot of belief that the adolescent has in his capacity reflects the belief that parents have expressed in him over the years. It makes a difference if, in response to their teenager's uneven performance, they have said, "You have what it takes" or "You'll never succeed"; "Mistakes are to learn from" or "Mistakes are stupid"; "Failure means you tried" or "Failure shows incompetence," "You know more than before," or "You've ruined your chances." Continually critical parents can drive the confidence out of adolescents who,

having internalized these messages, become trained in being unyieldingly hard on themselves: "I can never get it right," "I can't do well enough," "I'll never measure up," "There's no point in trying." Belief in one's capacity is the foundation on which self-confidence depends.

## EFFORT

"All it takes to build self-confidence is an act of effort. Many are the ways. Here are a few. Practice a skill, call a friend, earn some money, help someone out, volunteer your services, have something to offer, try something hard, cook a meal, clean your room, order your belongings, join a group, compete in a game, collaborate on a project, correct a mistake, do what feels scary, tell the truth, speak up for yourself, stand up for yourself, explore the unknown, finish what you started, work toward a goal, don't give up, fix something broken, meet a commitment, learn something new, solve a problem, act independently, do what's uncomfortable, make something better, make a creation, make someone happy." Effort is the engine that makes self-confidence run.

## OUTCOME

Now comes the tricky part. Outcomes affect self-confidence. A happy one can reinforce faith in capacity and recharge the engine of effort, self-confidence coming out stronger. However, unlike faith and effort, outcomes are not at a person's command because they are multiply determined, much of the time by chance. On the down side, lots of frustrations, disappointments, reverses, rejections, failures, and losses in life depend on many factors beyond the person's control.

1. Encourage three pillars of self-confidence. Believe in yourself: "I can do it." Motivate yourself: "I want to make the effort." Commityourself: "I will give it a good try."
2. Treat a failed attempt as evidence of trying. "You can't lose if you fail because you will be stronger for the effort made. Besides, in most cases people determine effort, not outcome which often depends on a lot of factors not in their control. So the only failure is failing to try."
3. Support aspirations. Future goals inspire present efforts by creating confidence that what one wants to happen later is connected to what one does now. In childhood and in early and mid-adolescence it's easy to be short-sighted. However, goals create far-sightedness that encourages confidence that how one invests in the present can have future payoffs. "I can work to get where I want to go."
4. Turn mistakes into confidence builders. Help the adolescent learn from the error of her or his ways. Knowing how not to do it wrong again helps people understand how to do it right later on. Mistake-based education is just part of how everybody learns the hard way."You can be confident that now you'll know better the next time!"
5. Value the willingness to practice. As repetition builds competence, confidence grows. Practice is an essential work habit. "I don't always like to practice, but I like improving when I do."
6. Recognize the gifts of adversity. Engaging with and recovering from hardships takes reliance on resourcefulness and builds resilience. Rising to life challenges builds confidence. "Seeing it through, I feel stronger now than I was before."
7. Support persistence. To keep after what you want in the face of frustration and failure takes dedication that builds confidence. "I don't give up easily when I don't get what I want the first time."
8. Treat infractions as exceptions. Mistakes and misdeeds will happen. A lot of confidence depends on the parental response. "You're nothing but a problem, all you ever do is mess up," drives confidence down. Fixating on the the problem makes the problem worse. Best to keep the infraction in a broad and positive perspective. "As a rule, you really take care of business and conduct yourself well. This one time you didn't, but we believe mostly you do, and we appreciate that."
9. Encourage problem solving. Before stepping in to fix an adolescent's problem, give the young person a chance to struggle to find a solution first. Problem solving builds confidence.
10. Give responsibilities. Contributing to the family welfare by doing chores and giving help treats the young person as a person with something of value to give, and that boosts confidence. "My parents rely on me."
11. Respect self-discipline. Meeting four components of self-discipline builds confidence. Complete what you start. Keep your Commitments. Maintain Continuity of effort. And Concentrate on the task at hand. "I have what it takes to make myself accomplish what I don't always feel like doing."
12. Nourish growth with challenge. Accepting a healthy challenge like trying out a new experience or something hard can build confidence.
13. Offer to help, but not too much. Because giving help can undercut self-help, don't help so much that dependency erodes independence. Self-help builds confidence.
14. Moderate your parental authority. When parents are too strict or commanding they can engender obedience at the expense of initiative. In this way confidence is discouraged by dependence. Better to support the young person's self-management responsibility. "My parents taught me to decide for myself."
15. Don't unload your worries. Expressing parental worry about the adolescent to the adolescent is often interpreted as a vote of no confidence by the adolescent; it's better confiding worries to a partner or a friend. Expressing parental confidence encourages confidence in the child. "Even when I was struggling, my parents believed in me."
16. Never criticize performance. Criticism from people whose opinion matters so much can result in hurt feelings, lowered esteem, and less motivation. Thus non-evaluative correction works best. Disagree with choices, but don't criticize character. "My parents didn't agree with all my decisions, but I knew they always loved how I was."
17. Encounter self-criticism. Young people who are prone to criticize themselves no matter how they do, keep driving self-confidence down. While self-evaluation can be instructive and boost confidence; self-criticism can be punitive and run confidence down.

As medical professional it is one of our responsibility to understand the loop holes in the relationship of parents and children and give counseling and medical assistance when required.

# FOGSI MCM September 2018

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# Predicting and Preventing Breast Cancer

Dr Manisha Jhawar

ICMR has revealed a scary picture by confirming that the rate of breast cancer in India has not just doubled but it is now gripping a decade younger women.

The breast cancers striking on less than 40 years women are mostly of the aggressive variety like Estrogen receptor negative or triple negative types. The breast at this age is dense and masks the cancer from routine screening programs. The detection is therefore, unfortunately at an advanced stage. Two thirds of the cancers in less than 40 years. Histologically also these tumors are labeled as aggressive, making the survival rate deplorable. The peak incidence of breast cancer in India is seen at 45-49 years of age with an exception of the North East India where the peak is seen at just 35-39 years.

This calls for a special attention and an urgent action as the statistics from the UK cancer registry clearly reveals that the highest peak of Breast cancer is seen at the age of 60-65 years.

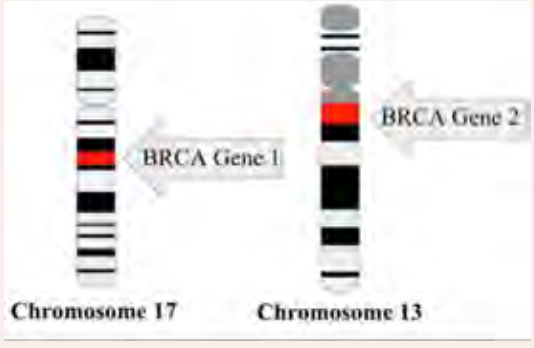
**It is important to spill the beans as to why the urban Indian women are bearing the brunt of the breast cancer the most? The answer would be the key to salvage.**

What's common between the affluent, educated, resourceful women of UK and the poor, less educated rural women of India living in meager resources? An active life style and low BMI are the two common factors blocking the beginning of breast cancer at an early age in western women & rural Indian women. Engaging in the house hold work for >7 hours was found to prevent the development of breast cancer. Similarly a waist hip ratio of <0.95 is also preventive. In the same row breast feeding has also been proved to be protective time & again. High parity also prevents a lady from breast cancer. Early menarche at <12 years & late menopause at >55 years predispose a woman to breast cancer. Unmarried, widow, divorced, illiterate or less educated and postmenopausal women are also more likely to develop cancer in the breast.

Betel, quid and tobacco chewing habits also make the women prone to breast cancer.

Day in and day out we feel and hear the environment is getting crappy, its consequences on the flora and fauna are bad. Breast cancer can also be triggered by the abundantly present human carcinogens, polycyclic aromatic hydrocarbons produced by the incomplete combustion of fossil fuels. These compounds are lipophilic and show affinity towards the fatty tissue of the breast just as any other fat reserve of the body. These hydrocarbons adduct in DNA and flags off the cancer causation cascade. The cellular response to adduct is genetically determined which may act as a trigger in women who are genetically susceptible to breast cancer.

The much talked of hereditary breast cancer accounts for just 5% to the load. Mrs Angelina Jolie's decision of undergoing a prophylactic bilateral mastectomy in 2013 to save herself from the impending Breast cancer because her mother died of it & her BRCA1 gene showed mutation generated a fear in the minds of the women and so much was read and told that people took genetic predisposition as the major cause. BRCA1 and BRCA2 are actually tumor suppressor genes, which may fail to do their job of DNA repair because of certain bad mutations. These mutations of BRCA genes are inherited in autosomal dominant manner making the woman highly susceptible for breast or ovarian cancer. Women who carry mutations on BRCA1 gene have a life time risk of 65% and those carrying mutations on BRCA1 & BRCA2 have a life time risk of 82% for developing breast cancer. In India BRCA1 mutations are common as compared to the BRCA2 mutations. Indian population also show some distinct sequence variants like 185delAG. Other gene mutations like ATM, TP53, CHEK2, PTEN, CDH11 and STK11 are also associated with breast cancer.



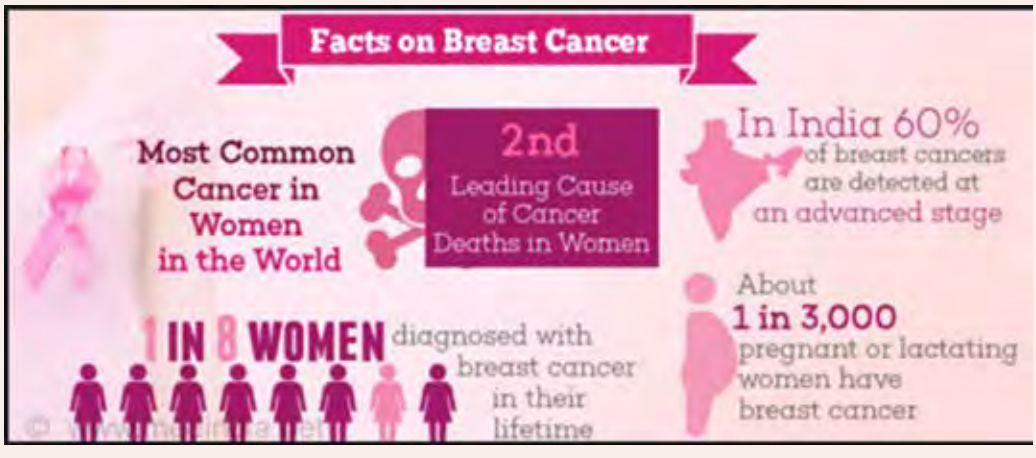

**The women who are at high risk for breast cancer should undergo regular check up at specialized centers.**

Mammography which is considered to be the gold standard screening test for breast cancer has its limitations. It is not reliable in women <40 years of age with dense breasts. Although expertise of radiologist and quality of equipment play a major role in picking up breast cancer but age, personal history and ethnicity also affect the predictive value. For the women >50 years whose breasts are less dense mammography is a very sensitive tool. Digital mammography with intravenous iodinated contrast injections increases the sensitivity by generating higher radiations and by focusing on tumor angiogenesis. It is more sensitive than mammography and ultrasound.

Ultrasonography of breast is another tool which is widely available and when used in conjunction with Mammography can increase the sensitivity of imaging but the specificity is reduced, increasing the biopsies.

Breast MRI can be useful for high breast cancer risk women and women carrying BRCA mutations, it is more sensitive than mammography & ultrasound but less specific.

***Caring for health, maintaining a healthy life style at midlife and judicious use of investigations can be very helpful in preventing mortality & morbidity from breast cancer.***



# Midlife

Dr Kusum Singhal

Midlife is an important span of life because of of the vulnaribility of this period for midlife crisis wherein a transition of identity and self-confidence that can occur in middle-aged individuals, typically 45–64 years old and last about 3–10 years in men and 2–5 years in women.The phenomenon is described as a psychological crisis brought about by events that highlight a person's growing age

During this time, adults evaluate their achievements, goals, and dreams against what they had wished for in the past, and what stage they are facing.This can leave them with a feeling of malaise and regrets, typical of midlife crisis. The crisis can take on many forms ranging from mild to dangerous, and may impact health, well-being, and finances. Personality type and a history of psychological crisis are believed to predispose some people to this "traditional" midlife crisis.People going through this suffer a variety of symptoms and exhibit a disparate range of behaviours and psychological upheaval popularly associated with mid-life crisis. some examples are

1. Buying a Sports Car
2. Drastic Changes in Habits, Mood Swings, and Impulsive Decision-Making
3. Shifts in Sleeping Habits
4. Obsession with Appearances.
5. Disconnecting from Old Friends, and Replacing Them with Younger Friends
6. Feeling Tied Down, with No Chance for Change.
7. Thoughts of Death or Dying.
8. Changing Careers
9. Leaving a Spouse or Having an Affair
10. Bouts of Depression
11. Increased Consumption of Alcohol or Drugs
12. Listless and Bored
13. Assigning Blame on others

A mid-life crisis could be caused by aging itself, or aging associated with Recent Traumas like

Going through a divorce, getting fired, a death of a family member or friend, or empty nest syndrome, physical changes associated with aging can all trigger a midlife crisis.

- Midlife crisis can affect men and women differently because

A man's midlife crises is more likely to be caused by work issues, a woman's crisis by personal evaluations of their roles. Even though there are differences between why men and women go through a midlife crisis, the emotions they both encounter can be intense.

One of the main characteristics of a mid-life crisis perspective, is one assumes that their mid-life is about to be eventful, usually in a negative way, and potentially stressful. Individuals experiencing a mid-life crisis may feel:

- a deep sense of remorse for goals not accomplished
- a fear of humiliation among more successful colleagues
- longing to achieve a feeling of youthfulness
- need to spend more time alone or with certain peers
- a heightened sense of their sexuality or lack thereof
- confusion, resentment or anger due to their discontent with their marital, work, health, economic, or social status
- ambitious to right the missteps they feel they have taken early in life.

## Treatment and prevention

Significant changes made early in life may prevent one from having a mid-life crisis .

Physical changes that commonly occur during these years are weight gain, wrinkles, sagging skin, hair loss.

Regular exercise and maintenance of a nutritious diet may help to sustain one's physical and mental health during these years of transition.

Whether a midlife transition will develop into serious depression or into an opportunity for growth depends on a number of factors, including support from partners and other loved ones.

### Ways To Deal With Changes In Your Male Partner

1. **Don't be judgmental.**

I think supporting a midlife guy is best in terms of telling him 'This is your time now. Do whatever it is you've always wanted to, but didn't have the energy for.

2. **Remain calm.** it's best to stay cool and think things through before lashing out.
3. **Respect his fear.** So your response to his crisis, whatever form it takes, should include sympathy and great, great respect for the fear that he might not even have identified, let alone dealt with.
4. **Pay attention.**

Be sure to make your marriage a priority before the kids are gone. The most important thing to do if you believe your husband/partner is having a male midlife crisis is to pay attention to him.

When Perimenopause Feels a Lot Like a Midlife Crisis or

When Menopause and Midlife Crisis Collide.

Menopause can be a challenging time, but it doesn't have to be the end of life as you know it. Taking control of your symptoms and reframing your state of mind can make midlife easier or even enjoyable.

When the body begins to make less estrogen. Symptoms of this estrogen loss can include hot flashes and night sweats, lower libido, fatigue, irregular periods, vaginal dryness, urinary leakage or urgency, insomnia, weight gain (especially around the midsection), and mood swings

and emotional changes—including anxiety, extreme emotionalism and sensitivity, lack of confidence, anger, and depression.

It's those last symptoms—mood swings and emotional changes , depending on how they manifest themselves, can read a lot like a midlife crisis.

So back to the woman in her midlife who is stressed-out, anxious, unhappy, and wondering if she should leave her husband or wife, quit her job, or get bangs: What, exactly, is she experiencing? the woman should take a wait-and-see attitude, when it comes to making big decisions. "Because if it's hormones, if it's perimenopause, then the woman could make a big mistake she regrets later."

Knowing What to Expect Can Help You Cope

Here are a few ways to manage menopause more successfully.

Exercise and stay active. One way to continue feeling physically and emotionally fit during menopause is by taking steps to get moving. "If you get 30 minutes of vigorous aerobic exercise, five days a week, you'll have a much better time dealing with your menopausal symptoms than if you don't," says Dr. Ford. Exercise also improves mood, increases energy, and can help you sleep better. Studies have shown that exercising regularly reduces hot flashes by 50 percent and improves heart and bone health to boot — both of which become compromised as estrogen levels drop.

Focus on your diet. It's also important to pay special attention to your diet in menopause. What you put in your mouth has a profound effect on your hormones (and by extension symptoms such as hot flashes, depression, anxiety, low libido, and insomnia). The last thing you want to do is give your body inappropriate fuel when it's already running a bit sluggishly. Studies show, for instance, that increasing your intake of omega-3 fatty acids and folate enhances mood and staves off hormone-related depression. Eating a healthful snack or meal every few hours (preferably one containing folate-rich leafy greens and/or fatty fish) also helps keep blood sugar levels in check, which helps reduce irritability, mood swings, and other menopausal side effects.

Ramp up your sex life. Chances are, the better you eat and the more you move, the sexier you'll feel — and that may lead to a more active sex life. Studies show a dip in happiness at midlife across the world, which fortunately is temporary and followed by an upward trend in life satisfaction (The Joy, 2010). Midlife is a time when we are no longer parented or mentored, but now are the ones with all the responsibility.

## Final Word

Many people do not believe in the concept of a midlife crisis, which makes living through one all the more difficult. Many experience a midlife crisis, or something akin to a crisis, when they reach middle age, and they need the support of friends and family members closest to them. A midlife crisis may be the beginning of a personal, emotional, and financial decline in an adult's life. Watch for the signs, and take steps to deal with the crisis accordingly.

# Metformin-the Old Drug and New Tricks- Repurposing the Wonder Drug.

Dr prerna keshan

Discovered by Jean Sterne from France in 1920, metformin is the most clinically developed biguanide. Glucophage (glucose eater) was the name proposed in the year 1957. During 1920s biguanides were discovered from the medicinal plant "Galega officinalis". Today metformin is the most widely used insulin sensitizing agent that has been used over ages for the treatment of Type II DM. During the last 15 years this oral hypoglycemic agent has been widely studied in patients with POLYCYSTIC OVARIAN SYNDROME, wherein insulin resistance seems to play a pivotal role in the pathogenesis of the syndrome. This drug review is aiming at appraisal of the use of metformin for the prevention and treatment of various adverse health outcomes in Obstetrics and Gynecology—

1. Normogonadotrophic anovulation also classified as WHO group II anovulation,the most common cause of anovulatory infertility-a direct effect of metformin on the ovarian morphology and environment has been demonstrated. It acts to improve intraovarian hyperandrogenism through local actions on ovarian steroidogenesis and through intraovarian insulin resistance interfering with autocrine/paracrine insulin related signaling.
2. Systematic reviews are required to evaluate the clinical effects of metformin on the reproductive outcomes when administered in patients with PCOS. Current metaanalysis showed serum E2 levels were lower which could in turn effect endometrial receptivity also explaining reduced miscarriage and improved implantation rates under metformin therapy.
3. Metformin has been recently studied for its use in prevention and treatment of pre-ecclampsia in pregnancy-it reduces soluble fms-like tyrosine kinase I and soluble endoglin secretion from the primary endothelial cells and preterm pre-ecclamptic placental villous explants and thereby improves endothelial dysfunction and enhances vasodilatation in omental arteries.Metformin in pregnancy is reported to inhibit hypoxic inducible factor 1alpha(α) by reducing mitochondrial electron transport chain activity (the activity of METCA is increased in preterm pre-ecclamptic placenta compared to gestation matched control subjects).
4. Effect of metformin on maternal and fetal outcomes in obese pregnant women (EMPOWaR), a randomized double blind, placebo controlled trial –a two year follow up of babies born to women treated with metformin demonstrated development of less visceral fat making them less prone to insulin resistance in later life-ongoing trials and aggressive research is needed to establish the evidence.
5. Metformin for the prevention of various gynecologic cancer –the molecular mechanism of this drug is secondary to its action on the mitochondrial respiratory chain, it has growth static effects on several cancers including ovarian and endometrial cancer. It effects on P13K/AKT/Mtor signal transduction pathway.It activates AMPK (AMP-activated protein kinase) and subsequent inhibition of downstream Mtor (mammalian targets of rapamycin), thereby decreasing metastasis and DNA mutation. A number of ongoing early phase clinical trials aim to explore the anticancer effects of metformin and investigate its potential as a chemotherapeutic or adjuvant treatment.

## References


1. Ajog-dec 21, 2015 supported by nhmrc (national health and medical research centre australia.
2. Human reproduction updatevolume 20, issue 6, 1st nov 2014.
3. Clark et all, 1995.Balen and anderson 2007.
4. ESHRE/ASRM 2008


Dear FOGSIans,

October, the tenth month of this year brings in the beautiful season of autumn.

This October let's focus on the things where we have an influence on.

Yes, it is our month to focus on "Midlife". People may call Midlife a crisis but actually it's not.

It's an unravelling- a time when people feel full to live life the way they want and not how it's supposed to be.

The unravelling to embrace yourself!!

Let's the opportunity to focus on our Midlife Goals and take steps to achieve them.

Happy Reading

Neharika

**Dr Neharika Malhotra Bora**
Joint Secretary
**FOGSI**

# NON HORMONAL THERAPY FOR MANAGEMENT OF AUB

**Dr.A.A.Faruqui, Clinical pharmacologist, Bandra (W), Mumbai-400050**

## INTRODUCTION

The menstrual cycle is one of the most exquisite display of biological rhythm. It is a fascinating combination of positive and negative feedback controls involving the hypothalamus, pituitary, thyroid, adrenals, ovaries and uterus.[1]

Each month the endometrium becomes inflamed, and the luminal portion is shed during menstruation. Aberrations in menstrual physiology can lead to common gynecological conditions, such as heavy or prolonged bleeding. Excessive or inappropriately timed bleeding from the vagina is one of the most common complaints for which women seek advice from healthcare providers.[2]

## ABNORMAL UTERINE BLEEDING (AUB)

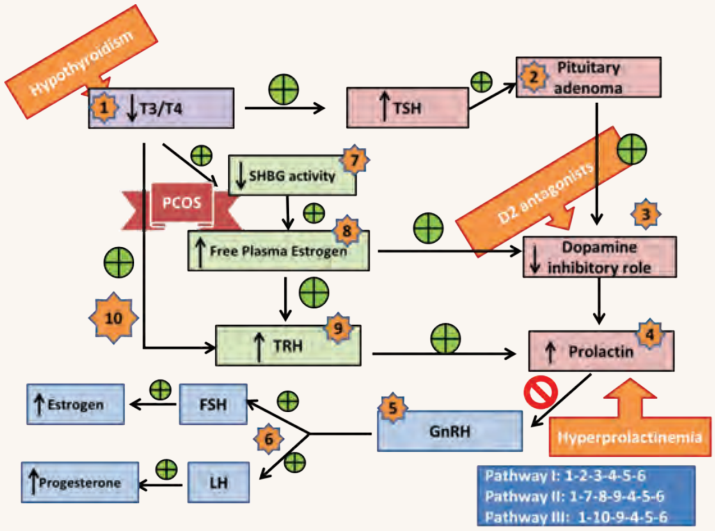
Bleeding that is unlike normal menstrual flow in terms of:

- Frequency
- Duration
- Quantity

It includes infrequent or frequent bleeding, heavy menstrual bleeding or intermenstrual bleeding. AUB is a leading cause for gynecological consultations.[3]

## ABNORMAL UTERINE BLEEDING & ITS CAUSES

Various underlying disease conditions like hypothyroidism, pituitary adenoma, PCOS, hyperprolactinemia, drug induced (dopamine antagonists like antipsychotics, antidepressants etc.) can lead to menstrual cycle irregularities. Hormonal imbalance due to various underlying causes is one of the major etiologies behind menstrual cycle irregularities.




**Various hormonal pathways leading to abnormal uterine bleeding**

## INCIDENCES OF ABNORMAL UTERINE BLEEDING IN INDIA

One of the major issue encountered during surveys have been underreporting. Bang et al found that only 7-8% of the women had ever had a gynecological examination in the past, even though 55% were aware of having gynecological disorders.[4]

92% of women in India suffer from gynaecological problems. In a study conducted among the women of rural India, 60.6% were having menstrual irregularities as one of the common gynaecological diseases.[4]

As per the National Health Portal (NHP) of India, the percentage prevalence of AUB in Indian females was around 17.9%.[5]

## UNMET MEDICAL NEED OF AVAILABLE THERAPY IN MANAGEMENT OF AUB

Hormonal Therapy (Progesterone alone or in combination with estrogen); possibly increase the unwanted 'premenstrual symptoms' including (bloating, oedema, headache, depression and reduced libido), irregular breakthrough bleeding, development of blood clots, gall bladder disease.[6]

While taking dopamine agonists (Bromocriptine, Cabergoline), 28-55% have reported of nausea, vomiting, abdominal pain, headache, postural hypotension, dizziness, drowsiness.[7, 8]

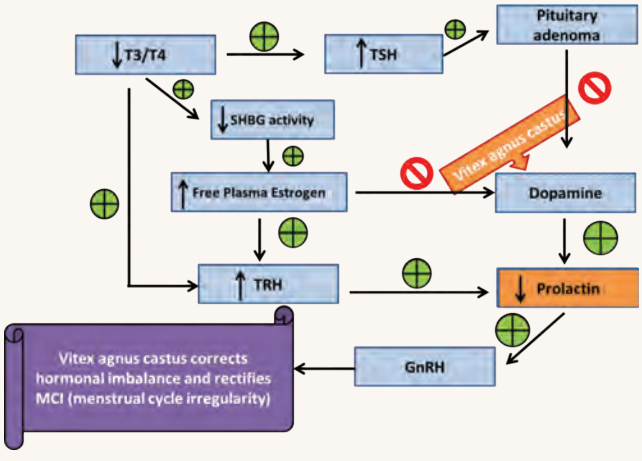
## NEED OF THE HOUR: SAFE AND EFFICACIOUS THERAPY

Phytopharmaceuticals can provide treatment and support for numerous fertility-related problems, such as hormonal dysregulation, thyroid and adrenal disorders, genitourinary infections, immune dysregulation, and stress-related problems with hormone like effects and minimal side effects.[9]

Vitex agnus castus also called as chaste berry is one such herb which has a long history of use for common gynecological complaints. It is approved in various European countries since year 1968 for various indications like: menstrual cycle irregularities, PMS, Mastalgia.[9]

## ROLE OF VITEX AGNUS CASTUS (CHASTE TREE) IN REGULATING HORMONAL IMBALANCE

- Chaste regulates prolactin levels, enhance corpus luteum development and correct relative progesterone deficiency.
- It modulates the anterior pituitary's production of luteinizing hormone (LH), while mildly inhibiting follicle stimulating hormone (FSH).
- It downregulates the production of excess prolactin in hyperprolactinemia via dopaminergic activity.
- Chaste berry reduces thyroxin-releasing hormone (TRH)–induced prolactin release (essentially a pituitary–thyroid axis problem).[9]




**Role of VAC (Vitex agnus castus) in regulating hormonal imbalance**

## CLINICAL EVIDENCES OF USE OF VAC IN VARIOUS GYNECOLOGICAL CONDITIONS

In an observational study conducted on 211 females with complain of Polymenorrhea, Oligomenorrhoea, Amenorrhea, Dysmenorrhea, Menometrorrhagia; the use of 20 mg VAC for 3 menstrual cycles has shown improvement in menstrual cycle irregularities among 79-85% also 60-88% females showed improvement in menstrual bleeding disorders.[10]

Another study conducted on 2,447 women with a variety of menstrual problems, use of VAC has shown improvement in symptoms by both patients and physicians. Also the safety profile of herb was excellent with only 2.3% reporting minor side effects.[11]

## SUMMARY OF SOME SELECTED CLINICAL TRIALS ON AUB

| Indication & Trial Design | Results/ Conclusion |
|---|---|
| **Oligomenorrhea, Corpus luteum insufficiency, polymenorrhea**[12]<br><br>Open labeled, uncontrolled, **120 women** with hormone imbalance syndromes on VAC for 6 months | ✓ Of the subjects, **63% had normalized cycle** (most had extended follicular phase) and those with disturbed temperatures during their cycles normalized.<br>✓ Patients with very low progesterone benefited particularly.<br>✓ **29% became pregnant.** |
| **Oligomenorrhea, polymenorrhea, menorrhagia**[13]<br><br>Open labeled, **126 women** (35 with oligomenorrhea, 33 with polymenorrhea, 58 with menorrhagia) on VAC for 2-3 months | ✓ In 58 patients with **menorrhagia**, a statistical significant shortening of bleeding period was achieved.<br>✓ In 33 patients with **polymenorrhea,** duration between periods lengthened (on average from **20 days to 26 days**).<br>✓ In 33 cases of **Oligomenorrhoea**, the average cycle was shortened from **39 to 31 days.**<br>✓ **11.1%** patients became pregnant. |

## DISCUSSION

In spite of the significance of menstruation in women's lives and the high incidence of menstrual related health problems in society, there is surprisingly little epidemiologic evidence on menstrual disorders and associated risk factors. Certain characteristics of menstruation can be a reflection of an underlying pathologic process or may predispose a woman to the development of chronic disease. For example, metrorrhagia predisposes to anemia, and the irregular menstrual cycles associated with PCOS can predispose a woman to infertility, diabetes and consequently, heart disease.[9]

Disadvantages of hormonal therapy arises the need of alternative treatment with similar or better efficacy and minimal ill-effects.

Vitex agnus castus being non-hormonal therapy has been used for centuries in menstrual cycle irregularities and also used in clinical practice to assist with withdrawal from hormone therapy.

## CONCLUSION

In view of the associated adverse effects of current therapy, the need of the hour is to explore alternative options which have at par efficacy & superior safety profile compared with modern medicine drugs. Vitex agnus castus having efficacy similar to conventional drugs with relatively superior safety profile is one such non-hormonal therapy which can be recommended as first line therapy in the management of menstrual cycle irregularities associated with secondary amenorrhea, hyperprolactinemia, and luteal insufficiency.

## REFERENCES


1. Thomas G. Guilliams. Female cycle difficulties. Non-invasive Diagnosis and Natural Treatment Options. The Standard, volume 4, no.2; 2001.

2. Howkins & Bourne Shaw's. Disorders of Menstruation. Textbook of gynecology, 13th edition, 2004; page number: 277-290

3. Beckmann and Lings'; Obstetrics and Gynecology, Chapter 39: "Amenorrhea and Abnormal Uterine Bleeding"; 8th edition (2018), pg. no.: 808-820

4. Bang RA, Bang AT, Baitule M, Choudhary Y, Sarmukaddam S, Tale O. High prevalence of gynaecological diseases in rural Indian women. Lancet. 1989 Jan 14; 1 (8629):85-8.)

5. NHP (National Health Portal of India); Updated on Jul 28, 2017; https://www.nhp.gov.in/disease/gynaecology-and-obstetrics/abnormal-uterine-bleeding

6. Hickey M, Lester S. The management of menstrual disorders in early reproductive life. The Obstetrician & Gynaecologist 2003; 5, 136-41.

7. Johnston DG, Prescott RW, Kendall-Taylor P, Hall K, Crombie AL et al. Hyperprolactinemia. Long-term effects of bromocriptine. Am J Med. 1983 Nov; 75(5):868-74.

8. S Motazedian, L Babakhani, SM Fereshtehnejad, K Mojthahedi. A comparison of bromocriptine & cabergoline on fertility outcome of hyperprolactinemic infertile women undergoing intrauterine insemination. Indian J Med Res 131, May 2010, pp 670-674

9. Aviva Romm. Botanical medicine for women's health, 2010; Chapter 12 (Fertility challanges); 334-346.

10. R Eltbogen, M Litschgi , U Gasser , S Nebel , C Zahner . Vitex Agnus-Castus extract (Ze 440) improves symptoms in women with menstrual cycle irregularities. Planta Med 2014; 80- SL19.

11. Loch E, et al. The treatment of menstrual disorders with Vitex agnus-castus tincture. [in German]. Der Frauenarzt 1991; 32:867–70.

12. Bubenzer R. Therapy with agnus castus extract (Strotan). Therapiewoche 1993;43:32–3, 1705–6.

13. Bleier W. Phytotherapy in irregular menstrual cycles or bleeding periods and the gynecological disorders of endocrine origin. Zentralbl Gynäkol 1959;18:701–9.