



IS PCOS ASSOCIATED WITH A HIGHER PREGNANCY LOSS?

NO

BY DR SHEELA V.MANE

CURRICULUM VITAE



Name : Prof. Sheela V. Mane

Qualifications : MBBS, M.D, FICOG, FICMCH

Contribution to FOGSI: Chairperson Safe Motherhood Committee (2008-2011). Participated in FOGSI Emergency Obstetric Care Training.

Contribution to local society: Ex-President Bengaluru Society of obgyn (BSOG) Received President's Trophy for Best society award during her secretarial post and Dr. D.K. Tank trophy for best community service during her presidential year.

Publication in FOGSI and other Journals: Articles in FOGSI Focus on APH, Safe pregnancy & delivery, Post partum care in FOGSI publications, Elsevier publication-Luteal Phase.

Prizes & Awards: Best committee report presentation (Safe Motherhood Committee) at MCM at Agra in 2009. Received Best Society Mehru Dara Hansotia Award for Safe Motherhood Committee (2010-2011) at Hyderabad AICOG. Best teacher award at Dr. B R Ambedkar Medical College 2005.

Teaching Experience: Worked as a teacher at Dr. B R Ambedkar Medical College from 1986 to 2005 in the capacity of Assistant Professor, Associate Professor and HOD. Presently DNB teacher at Bhagwan Mahaveer Jain Hospital, Bangalore.

Posts:

- Vice President, FOGSI 2014
- Secretary, Indian Menopause Society, Bangalore chapter 2012-2014
- Chairperson of Safe motherhood committee FOGSI 2008-2011
- President, Bangalore society of OBGYN 2005-2006
- Ex Prof Dr. B R Ambedkar Medical College, Bangalore
- Ex Vice President, Karnataka Cancer Society, Bangalore
- Ex Vice President Family Planning Association of India (FPAI), Bangalore
- National Facilitator Adolescent Health (WHO)

Polycystic Ovarian syndrome

It is one of the most common endocrine/metabolic disorders found in women, affecting approximately 105 million women worldwide

Heterogenous syndrome: chronic an ovulation & hyper androgenism

Metabolic impact on multiple organs

PCOD is not a disease but an ill understood phenomenon

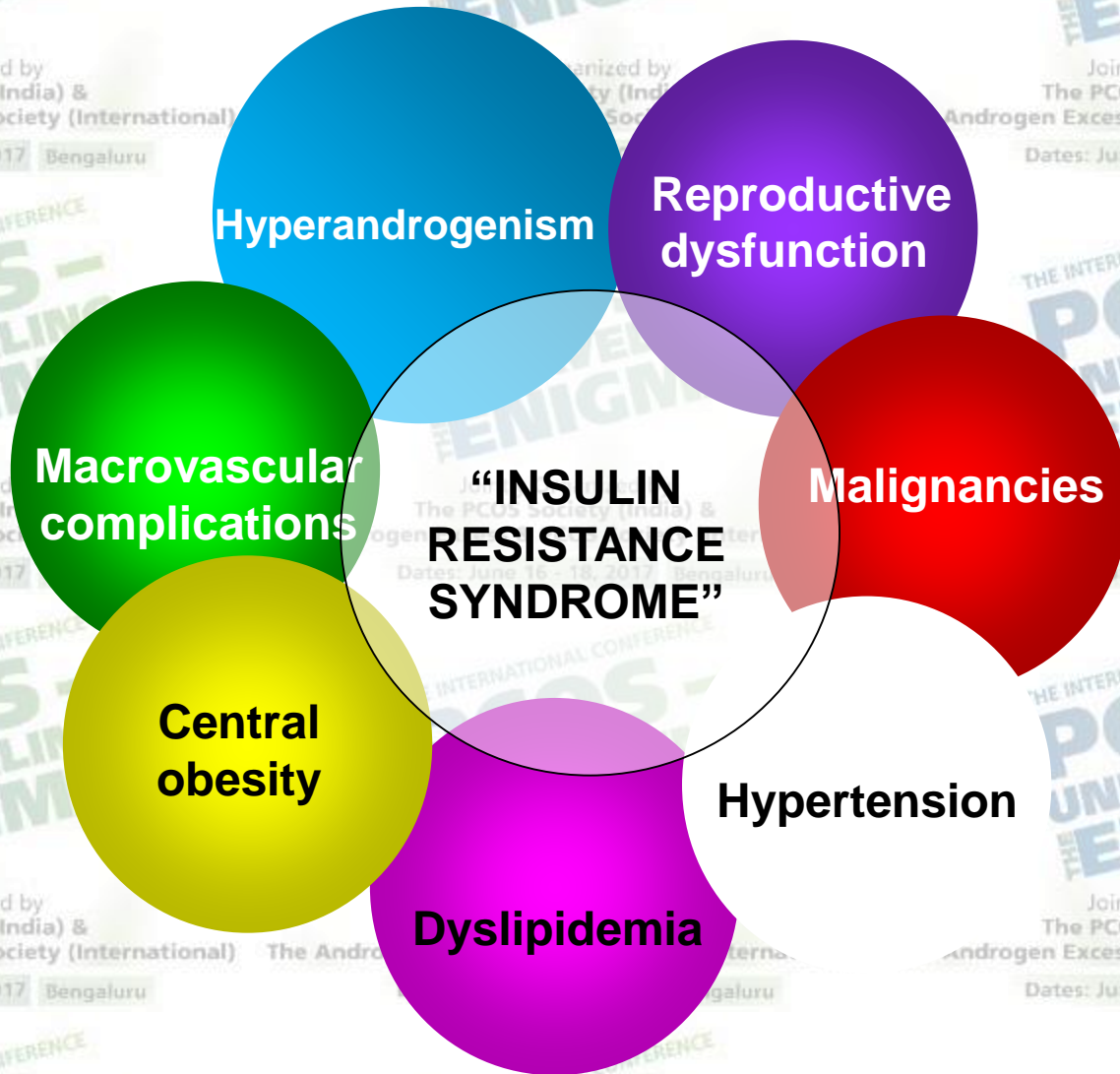


• PCOS is the consequence of chronic anovulation

• It is not a discrete endocrine disorder having a unique pathophysiology

• It is a final common pathway in the chronic anovulatory state

PCOS: A complex metabolic disorder



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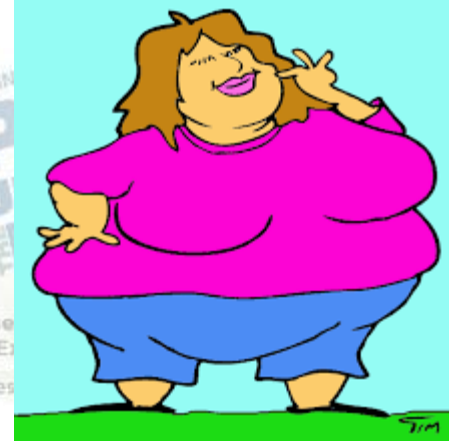
OVARIAN MORPHOLOGY IN PCOS

- Enlarged ovaries
- Numerous peripheral small antral follicles
- Increased central stroma
- Follicular growth till mid antral stage followed by arrest
- Granulosa layer thinning and thickening of thecal layer which leads to increased androgen production

- Mid antral follicle arrest does not signal the onset of atresia
- Majority of follicles in PCOS are not apoptotic but retain ample functional capacity



OBESITY AND PCOS



- Prevalence ranges from 35-60%
- Contributes to anovulation in 3 distinct ways
 - ❖ Increased peripheral aromatization of androgens
 - ❖ Decreased levels of hepatic SHBG
 - ❖ Insulin resistance

Lifestyle Modification is First-Line Treatment for PCOS

Lifestyle modification programmes with an emphasis on behavioural management and dietary and exercise interventions have been successful in the general population in reducing the risk of diabetes and the metabolic syndrome, and have had some initial success in improving fertility outcomes in PCOS.

Symposium: Diet, nutrition and exercise in reproduction

Effects of lifestyle modification in polycystic ovarian syndrome

[Lisa J Moran. Author links open the author workspace.](#)^a Numbers and letters correspond to the affiliation list. Click to expose these in author workspace.^b [Grant Brinkworth. Author links open the author workspace.](#)^a Numbers and letters correspond to the affiliation list. Click to expose these in author workspace.^b

[Manny Noakes. Author links open the author workspace.](#)^a Numbers and letters correspond to the affiliation list. Click to expose these in author workspace.^b [Robert J Norman. Author links open the author workspace.](#)^b

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PCOS and PREGNANCY LOSS

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Polycystic ovary syndrome and pregnancy outcome: red herring or red flag?

D Siassakos, P Wardle

- Even though women with PCOS who are on metformin prior to conception may not want to stop the drug during pregnancy, there is currently insufficient evidence to support its routine use antenatally.
- Women with PCOS are, however, usually older than average when they conceive, commonly nulliparous and frequently obese. These are all independent risk factors for important pregnancy complications, including GDM and PET.

A true causative association between PCOS and pregnancy loss remains unproven

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Issue related to PCOS	Existing evidence	Future research
Reduced insulin sensitivity	Direct and indirect evidence is supportive of its role in PCOS	Optimal means to diagnose insulin resistance in women with PCOS
Genetic basis for PCOS	Insulin action/receptor implicated	Specific genes and possible role for genetic interventions
EPL	Possible association with PCOS but few studies have used the consensus criteria for case ascertainment	The role of metformin needs to be assessed in a large study
Antenatal complications	Existing studies of small size and low quality—main problem is confounding	Large prospective observational studies or randomised controlled trials are necessary. Studies on diabetics may prove informative
Puerperium	Limited evidence for the safety of metformin for women with PCOS	Safety and usefulness of metformin needs to be firmly established first
Adult life of fetuses	Indirect evidence only	Studies with long follow up are necessary

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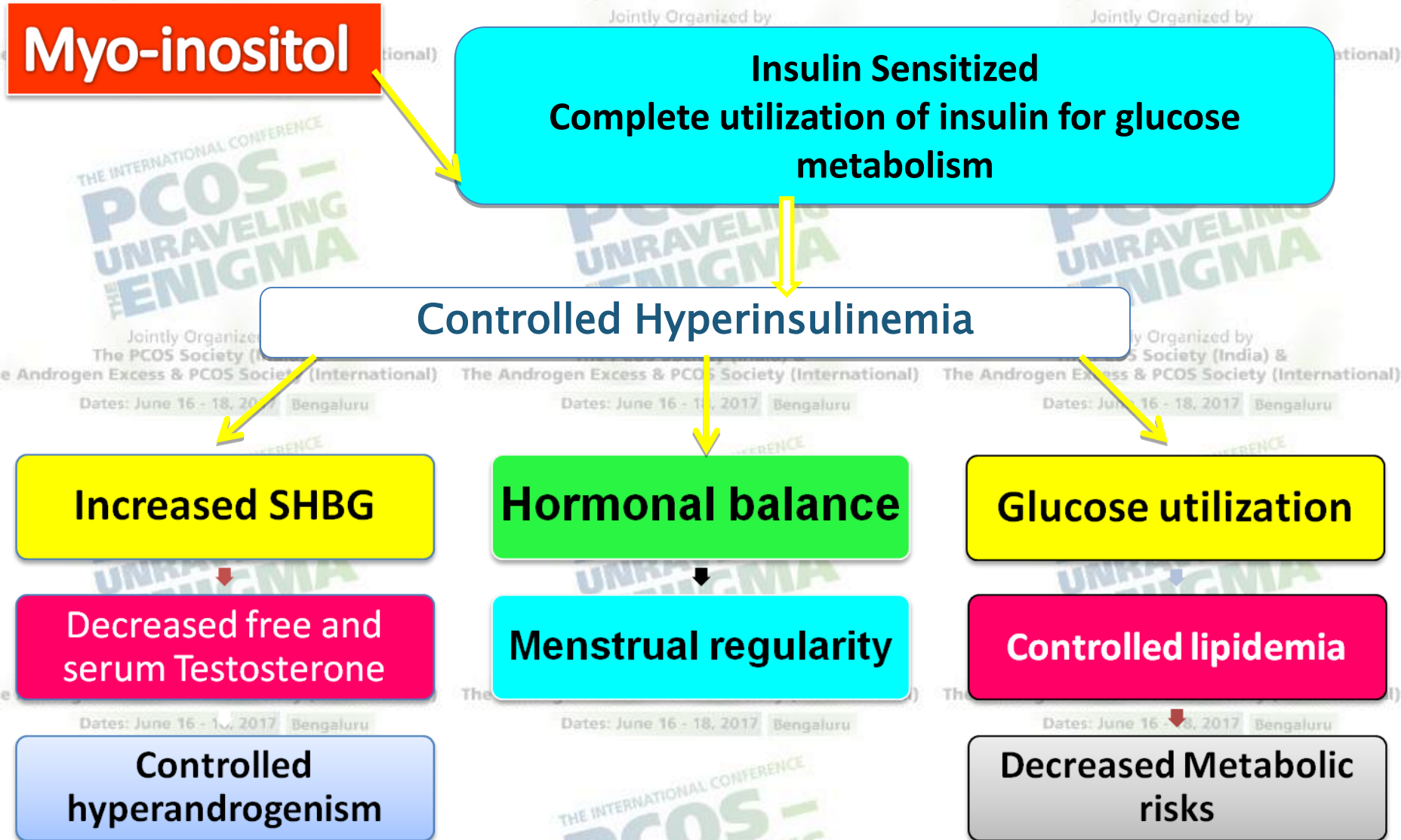
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Myo-inositol – The ultimate insulin sensitizer





- Women with PCOS have a higher incidence of spontaneous pregnancy loss, the mechanism of which remains unclear.
- In a much larger study, it was observed that polycystic ovarian morphology was not predictive of pregnancy loss among women with recurrent pregnancy loss.
- Additional research is necessary to determine the prevalence of recurrent pregnancy loss in PCOS.



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- To conceive many women with PCOS require ovulation induction or IVF and are at increased risk of multiple pregnancy.
- However it is uncertain to what extent the medical condition itself influences pregnancy and neonatal outcome.

• *Balen et al, 1994*

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- A recent meta analysis of early pregnancy outcomes after IVF in women with PCOS showed no significant difference in the live birth, pregnancy or miscarriage rates versus controls.
- *Heijnen et al 2006, Human reproduction update vol 12, issue 6*

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- Clinical studies have shown that administration of **Metformin** to PCOS women resulted in decreased androgen levels, increased rates of spontaneous ovulation and enhanced ovulatory responses to clomiphene.

Metformin therapy during pregnancy in women with PCOS was safely associated with reduction in spontaneous abortions and in And was not teratogenic and did not adversely affect birthweight or height and motor and social development at 3 and 6 months of life

- *Human reproduction, vol 117, issue 11, nov 2002*



- IVF seems an appropriate treatment option for PCOS patients.
- Women with PCOS have similar pregnancy and live birth rates as a woman without PCOS,

Human reproduction update vol 12, Jan 2006

- Favourable IVF outcomes have been reported applying in vitro oocyte maturation in PCOS

(Tan and Child 2002)

- **[Outcome of pregnancy in women with polycystic ovary syndrome treated by in vitro maturation of immature oocytes].**

• [Article in Chinese]

• [Zhao JZ¹](#), [Chen X](#), [Wang PY](#), [Zhou W](#), [Lin JJ](#), [Zhang W](#), [Huang XF](#), [Lin WQ](#), [Yang HY](#), [Chen Y](#).

• [Author information](#)

• **Abstract**

• **OBJECTIVE:**

• To investigate pregnancy outcome of infertility women with polycystic ovary syndrome (PCOS) treated by in vitro maturation (IVM) of immature oocytes.

• **METHODS:**

• From Nov. 2003 to Oct. 2007, medical documents of 118 women with PCOS underwent 140 IVM treatment cycles in Reproductive Medical Center of First Affiliated Hospital of Wenzhou Medical College were collected. Follow up of 62 pregnancies were performed by prenatal examination in hospital or telephone query to record perinatal monitoring and pregnancy outcome.

• **RESULTS:**

• There are 62 pregnant women including 5 biochemical pregnancies and 57 clinical pregnancies obtained in 140 transferred cycles, resulting in the pregnancy rate of 40.7% (57/140). The rates of singleton pregnancies, twin pregnancies and triplet pregnancies were 61.4% (35/57), 29.8% (17/57) and 5.3% (3/57), respectively. The rate of ectopic pregnancy was 3.5% (2/57). Seven (7/57, 12.3%) women underwent early abortion during 7-14 weeks of pregnancy, and 1 case (1/57, 1.75%) with premature rupture of membranes occurred at 22 gestational week. One woman with twin pregnancy spontaneously reduced to singleton at 8 gestational weeks. Totally, the rate of pregnancy complications was 26.3% (15/57) including premature rupture of membranes (1 case), placenta previa (1 case), hypertensive disorder (1 case), preterm delivery (10 cases) and gestational diabetes mellitus (2 cases). Until now 47 women gave birth to 65 infants including 29 singleton infants and 18 twins. One female preterm neonate died after 6 days' delivery due to pneumonia, no malformation was observed on the other neonates. 21.3% (10/47) of deliveries were premature, 76.6% (36/47) of deliveries were full-term, 2.1% (1/47) of deliveries were postterm. The mean birth weight was 2972 gram. The rate of infants with low weight was 26.2% (17/65).

• **CONCLUSIONS:**

• A relatively high clinical pregnancy rate has been achieved, the rates of early abortion, ectopic pregnancy, pregnancy complications, perinatal mortality, and neonatal malformation occurring after the treatment of IVM in women with PCOS are not mounting. However, the relative high rates of multiple pregnancies, low birth weight and preterm labor were increase

Polycystic Ovary Syndrome and Pregnancy Outcome: Red Herring or Red Flag?

Siassakos D, Wardle P

BJOG. 2007;114:922-932

A number of problems (genetic, hormonal, infectious, hematologic, immunologic, and anatomic) increase the risk for pregnancy loss. Therefore, when early pregnancy loss rates are compared between women with PCOS and the general population, such confounding factors need to be considered. Inappropriately controlling for these confounding factors has led previous investigators to dispute the increased risk for miscarriage among women with PCOS.

5 PCOS Diet Plan Tips To Boost Your Fertility and Help You Get Pregnant

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How a plant grows from a seed



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Nature Nurtures

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