

## *New updates in Gynecology and Obstetrics*

### **The American College of Obstetricians and Gynecologists (ACOG) 2018 Update**

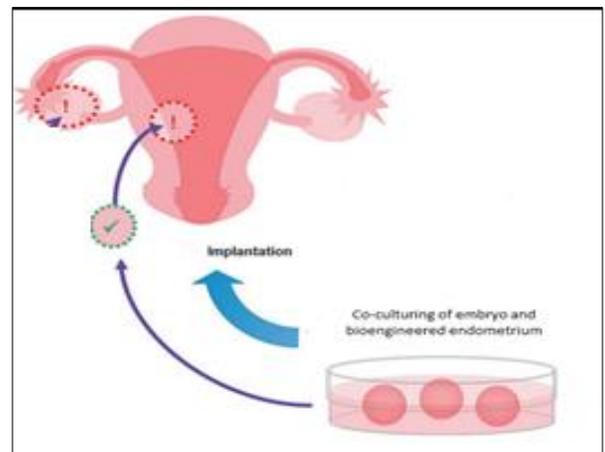
#### **Letrozole is the first line therapy for ovulation induction in PCOS**

- ❖ ACOG 2018 recommends that for women with PCOS, **Letrozole should be considered as first-line therapy for ovulation induction because of the increased live birth rate compared with clomiphene citrate.**
- ❖ This recommendation is based on good and consistent scientific evidences citing better ovulation rates, clinical pregnancy rates and live birth rates as compared to Clomiphene citrate.

*(Ref - ACOG PRACTICE BULLETIN SUMMARY Clinical Management Guidelines for Obstetrician–  
Gynecologists. 131(6),2018*

#### **Human endometrium in a Petri dish! – A Potential tool for implantation research**

- ❖ **Doctors of Patki Hospital and Research foundation, Kolhapur, Maharashtra** have developed a 3D bioengineered endometrium in culture dish using the tissue culture technique.
- ❖ They have co-cultured the bioengineered endometrium with two blastocysts which resulted in the formation of pinopodes which are a hallmark of implantation.
- ❖ The doctors have concluded that such bioengineered endometrium if co-cultured along with the embryo has a potential to further sensitize it for better chances of implantation after transferring them actually to the endometrial cavity.

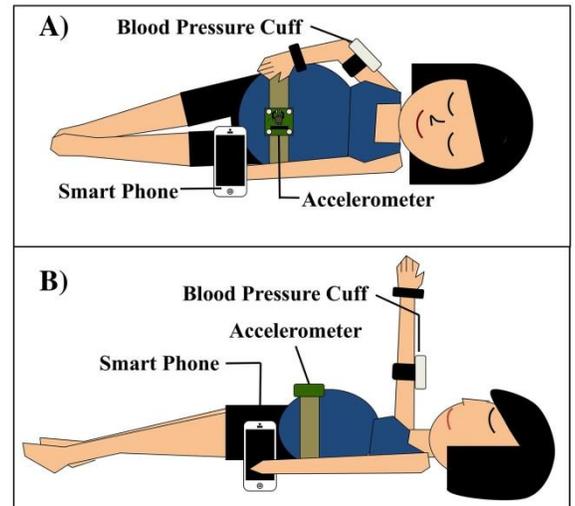


- ❖ Apart from this, they have concluded that bioengineered endometrium retains all its functional components and hence will avoid repeated invasive procedures of endometrial biopsies which are truly traumatic for the patients.

(Ref - *Gynecol Reproduct Endocrinol* 2017 1(1))

### Wearable technology can help pregnant women detect health complications

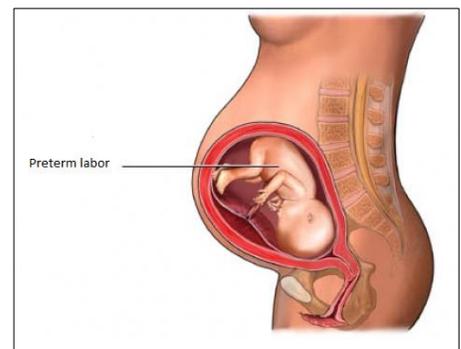
- ❖ **Researchers at Purdue University, Indiana, US** are developing an app and a wearable technology to enable pregnant women to use a smart phone to detect whether they have or are susceptible to preeclampsia, pregnancy complication caused by high blood pressure that can cause organ damage and premature birth.
- ❖ This technology is an amalgamation of **smart phones, a conventional inflatable blood pressure cuff and wireless accelerometer (which measures the body position)**
- ❖ The device measures whether a woman's blood pressure increases when she changes position from lying on her left side to lying on her back. **If the diastolic pressure increases enough, it is a warning sign that a woman is susceptible to preeclampsia**
- ❖ Additionally, the women can send the results to a doctor's office for the results to be read and where they could receive counseling so they can start management and treatment options as early as possible.



(Ref - <https://medicalxpress.com/news/2018-05-technology-pregnant-women-health-complications.html>)

### Vaginal Sildenafil Citrate enhances the tocolytic effect of Nifedipine during threatened preterm labor

- ❖ Sildenafil citrate being a selective inhibitor of cGMP specific phosphodiesterase (PDE-5), it prevents the degradation of cGMP. cGMP has a role in reducing intracellular calcium and relaxes smooth muscles .



- ❖ Hence vaginal administration of Sildenafil administered as 25mg at 8-hourly intervals acts synergistically with Nifedipine which is given 20 mg orally (stat dose), followed by 10 mg orally every 6–8 hours at the same time as vaginal Sildenafil.
- ❖ The combination of Nifedipine and Sildenafil relaxes uterine smooth muscles and reduces preterm labor by 16% as compared to Nifedipine used alone.

*(Ref : BJOG. 2018 Oct 13.)*



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