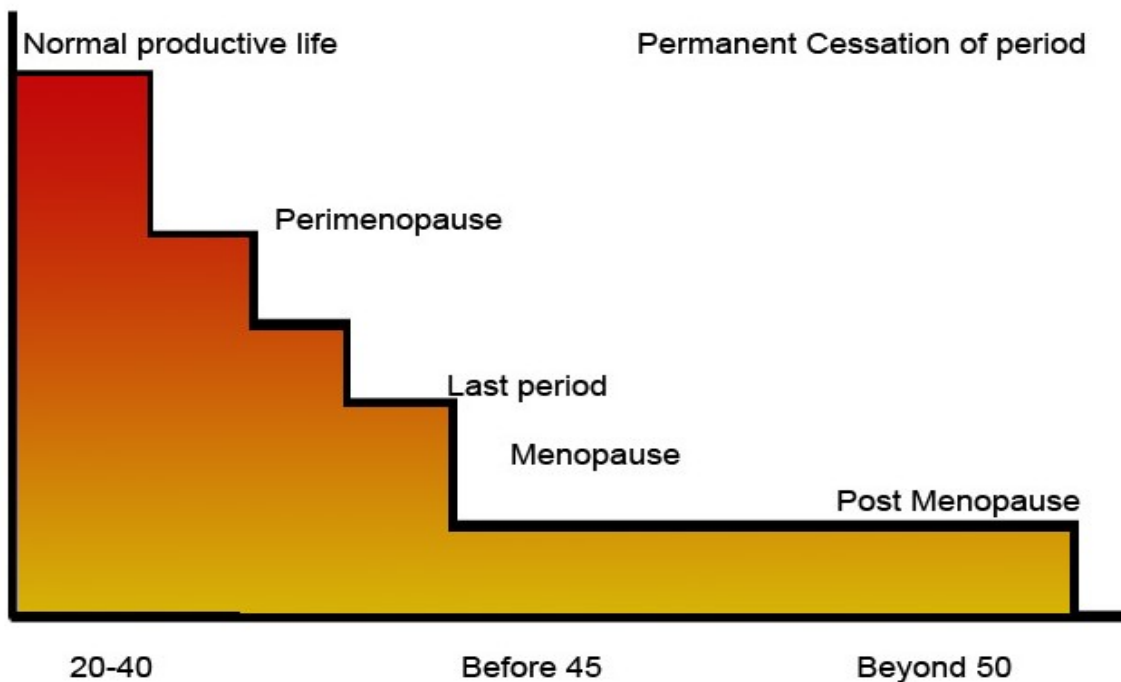


Premature Menopause & its Management

Premature menopause is a condition in which a woman stops menstruating completely before the age of 40 years. Sometimes this can occur as early as 30 years leading to various problems related to health and reproduction in the affected women.

The ovaries have two functions, the first being to produce eggs for fertility and the second, to produce reproductive hormones. The ovaries make three types of steroid hormones: - *testosterone*, *estrogen* and *progesterone*. The ovaries are most active during the ages of 20-30 years.

Estrogen levels during Menopause



Global statistics suggest that approximately 1-4% of women stop ovulating and menstruating before the age of 40yrs and those women who reach menopause prior to the age of 40 years are considered to have **premature menopause**.

The causes of premature menopause may vary from person to person, the commonest causes being.

- Ovarian Surgery, anti-cancer drugs or radiation therapy for cancer
- Genetic disorders like turners syndrome, swyers syndrome
- Infections like mumps, tuberculosis etc
- Environmental toxins like tobacco etc
- In 5-30% of cases there may be a family history
- In many cases the cause remains unknown

Women who attain premature menopause at a relatively young age, face various problems.

- They stop menstruating and ovulating at a young age, hence natural conception is hampered leading to **infertility**.
- Due to lack of reproductive hormones there are many **long term health issues**.
- Psychologically a women gets disturbed because she is no longer menstruating as her contemporaries are, and **it makes her feel older**. Added to that she has **various symptoms** related to estrogen deficiency.

□ ***Infertility:-***

Due to the absence of good quality eggs, infertility becomes a major consequence of premature menopause. A very small percentage of women may spontaneously become pregnant, but there are no medical investigations to predict which of these women would conceive.

□ ***Health related issues:-***

Women with premature menopause are at increased risk of osteoporotic bone fractures, atherosclerotic heart disease, cancer of the colon, Alzheimers and Parkinsons disease. All these conditions are related to a low estrogen state. The risk is similar to that seen after natural menopause.

□ ***Symptoms :-***

Due to the hormonal changes following premature menopause, a women may get hot flushes, have mood swings, get irritable develop insomnia or may also go into severe depression.

The Seven Dwarves of Menopause



Itchy, Bitchy, Sweaty, Sleepy, Bloated, Forgetful & Psycho

Diagnosis :-

Clinical presentations:

- The first symptom is absence of periods.
- Due to her low levels of estrogen, she may have mood changes in form of irritability, emotional lability, depression etc. She may also have hot flashes, decreased sex drive, fatigue, night sweats, vaginal dryness or palpitations. I have seen such women being treated by various specialists such as psychiatrists cardiologists, neurologists etc. when all they need is a little of estrogen therapy.

Investigations:

- Measurement of hormones is the key to the diagnosis.
- Rise in serum follicle stimulating hormone (FSH) levels. A value $>40\text{u/l}$ is suggestive of menopause.
- Low levels of estrogen ($<20\text{pg/ml}$)
- Low Serum Anti-Mullerian Hormone(AMH) levels suggestive of poor ovarian reserve.
- Serum prolactin and thyroid levels need to be done to rule out the common causes of amenorrhoea
- Chromosomal analysis to rule out a genetic disorder.

The hormone profile needs to be repeated on three occasions at least one month apart, because in certain instances the ovaries may return to normal after a phase of low activity.

Ultrasound:

On ultrasound, the ovaries are smaller than normal, the ovarian volume being less than 3 ml. Hardly any follicles are seen in the ovaries and the endometrium is thin, less than 5 mm in thickness.

Management

This depends on how the patient presents to her doctor. If she has a problem of infertility, then she is investigated further accordingly and counselled. If she has menopausal symptoms then the symptoms are attended to with the appropriate therapy. And if she has no problems, she is still advised further management in order that she does not have a poor quality of life in her later years due to the aging process starting prematurely.

Management of Symptoms of Menopause and prevention of long term health risks:-

Women who experience symptoms are managed with supplements and hormone replacement. A wide range of HRT preparations are available for estrogen replacement including oral, transdermal, subcutaneous and vaginal routes of administration. The choice of estrogen is made on an individual basis. These women will need hormone replacement at least till they reach an age of natural menopause (in order to avoid premature aging).

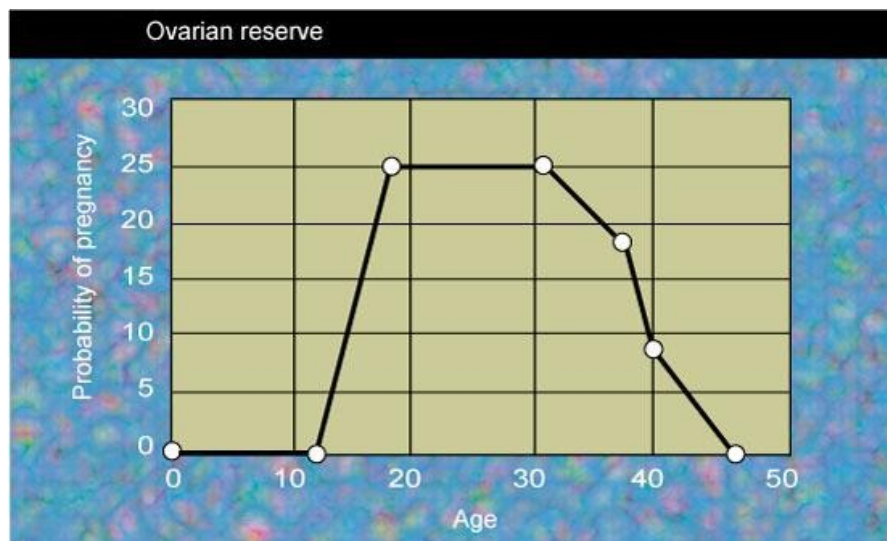
Hormone replacement therapy is absolutely necessary in these young women, contrary from women who have reached natural menopause in whom it is optional. The benefits and risks of HRT are discussed in another chapter in this same issue. One must remember, that in cases of premature menopause the benefits of hormone therapy definitely outweigh the risks.



Intake of calcium and vitamin D, avoidance of smoking and alcohol abuse also help to prevent osteoporosis. Affected women are counselled to carry out weight bearing exercises and to have a balanced nutrition.

Once a woman is found to be menopausal, whatever maybe the cause or at whatever age,, we advise her to undergo all the necessary investigation done in a postmenopausal women.

Management of Infertility



After the age of 30 years, there is a slight decline in number and quality of eggs. Hence the probability of pregnancy also decreases a little, but definitely gets affected by the age of 37 years and over. By the age of 50 years, the function of ovaries is affected to such an extent that the woman stops ovulating and menstruating completely and menopause sets in. This is the reason why we recommend women to complete their families before the age of 35 years. When this process is accelerated by one or more factors (known or unknown), it results in premature menopause.

- **Invitro fertilisation (IVF) with donor eggs.**

Eggs are donated to her by another younger fertile woman, the eggs are fertilised with her husband's sperms and we replace the resulting embryos in her uterus to create a pregnancy. The live birth rate after egg donation varies between 50% -60% globally. Our own experience has been very satisfying with the use of donor eggs when warranted.

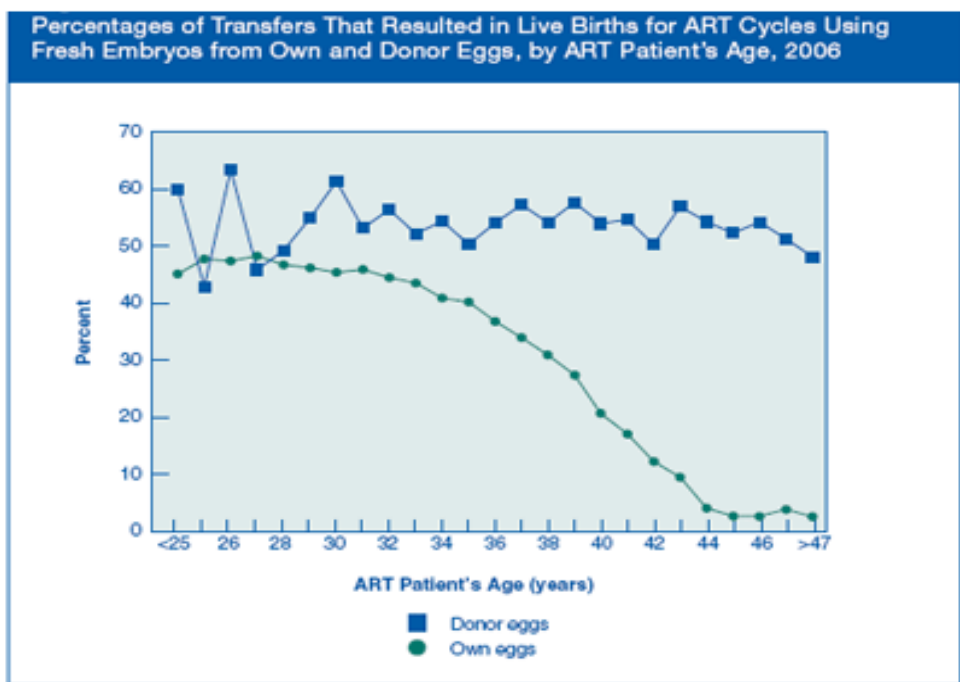
The procedure for donor IVF which we follow is:-

- ✓ The couple and us agree that donor egg is the best option
- ✓ Donor is selected and screened for HIV ,Hepatitis ,genetic disorders, other sexually transmitted diseases
- ✓ The patient and the donor menstrual cycles are synchronised
- ✓ The Donor is started on medications to produce more eggs
- ✓ Meanwhile the uterine lining of the patient is prepared with estrogen
- ✓ We retrieve the eggs from the donor and fertilise them with sperms of the patients husband to form embryos
- ✓ The embryos are transferred to the patient's uterus.

- ✓ The patient is asked to continue her hormone supplements till 12 weeks of pregnancy

Adoption

For some couples the idea of donor eggs may not be acceptable due to legal, ethical or psychological issues. These couples are counselled and motivated to adopt children through recognised adoption Agencies. As doctors, we fully co-operate with the couple preparing all their medical records required for adoption.



Clinical pregnancy rates with donor eggs whether transferred into self or a surrogate, vary between 50-70 % in various centers. At our center, the pregnancy rate with donor eggs in Surrogates has been extremely encouraging and is currently 65.6%. The pregnancy rates in Indian centers matches the rates internationally.

Caution:

It is important for every physician who deals with cancer in young men & women, that the eggs & sperms are frozen in an IVF lab before subjecting the affected individuals to radiotherapy or chemotherapy. By carrying out this simple procedure we are freezing their fertility and the frozen gametes are used later when needed.

Conclusion

In the fourth decade, many women are happy when they stop their periods ie. when they reach menopause. Unfortunately there are some women, about 1% , who reach menopause before the age of 40 years. These are the women who suffer from “Premature Menopause” and this condition definitely requires management and should not be considered as a “Good riddance” situation!

Counselling plays a very important role in management of premature menopause. Modification along with lifestyle, regular exercise and dietary changes can go a long way .Equally important is the support of the family to overcome this stressful condition.

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