



Chennai Menopause Society

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“Changes not Challenges”



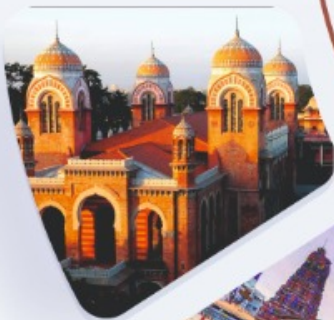
by

International Webinar on Healthy Aging on
Saturday & Sunday 23rd & 24th October

Reflect, Renew, Relax

*Embrace each challenge in your life as an opportunity
for self – transformation – Bernie Siegel*

Souvenir



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IMS President's Message



Greetings from Indian Menopause society!

Dear Hepzibah and team, Chennai Menopause society.

It gives me immense pleasure to pen down few words of best wishes for your Souvenir.

The COVID 19 pandemic has changed our lives and thrown the whole world into uncertainty and apprehension. A ray of hope was there after first wave. But second wave has come like tsunami which was much more devastating. It has been over eighteen months since the start of the pandemic and there is no end in sight yet. But positive aspect is acquiring more knowledge about e- learning and much more!

Hepzibah! your organisational skills are excellent. Webinars which you are conducting online are no way inferior to physical CMEs.

Imparting knowledge through 'Healthy aging series' is appreciable. It is highly informative, Awareness programmes you and your team is undertaking about nutrition, exercise, lifestyle modifications to various sections of women like teachers, nurses, paramedics and house wives is appreciable.

I wish you all the best for the future endeavors

Regards

Ambuja

President, Indian Menopause Society 2021



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International IMS Past President's Message



The **mission** of the International Menopause Society is to work globally to promote and support access to best practice health care for women through their menopause transition and post-reproductive years, enabling them to achieve optimal health and well-being. The **vision** of the International Menopause Society is that all women across the world will have easy and equitable access to evidence-based knowledge and health care, empowering them to make fully informed mid-life health choices.

The mission and vision of the IMS is best achieved at the local level, with national and regional societies identifying the needs of women in their communities, and delivering refresher training for clinicians working in the field of menopause, and education and awareness program for other health care providers and the community. Destigmatising menopause and the use of menopausal hormone therapy is an on-going task. Local societies can start the conversation to normalise menopause by engaging with community leaders and the media.

Thank you all for your ongoing work in this field and my heartiest congratulations to team Chennai Menopause Society, and I wish all success for the two days of your international online congress on 23rd and 24th October.

Professor Susan Davis AO
Immediate Past President, the International Menopause Society



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CMS President's Message



Dear Colleagues, Seniors & Friends,

Greetings from Chennai menopause Society. I extend a hearty welcome to International Webinar on “**Healthy Aging**” on Saturday & Sunday 23rd & 24th Oct.

Older population is increasing rapidly and expected to be 103 million by 2026. Women out live men and according to WHO average life expectancy of a women in India is expected to be 77 years by 2050. Indian women attain menopause earlier by 46.5 years and one third of their life is spent in postmenopausal period. Menopause has short and long term consequences which can lead to Public health problems.

Chennai menopause society's vision is to promote the wellbeing of women in Midlife & Beyond and our mission is to increase awareness about peri & postmenopausal health issues through public forum, conducting screening camps, and to promote optimal management through CME & Conferences.

Pre-congress workshop includes live workshop on office hysteroscopy and COSMESIS at Midlife & Beyond. Interesting aspects of webinar include Oration, Key note address Panel discussion, Dialogue, Debate & lectures by National and International experts. Though virtual congress will be interactive and i assure you it will be an enjoyable academic bonanza and your participation will make it a memorable one.

Dr. N. Hephzibah Kirubamani

President Chennai Menopause Society



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Chief Guest's Message



I am pleased to know that Chennai Menopause society is conducting Annual International Webinar on Healthy Aging 23rd & 24th October 2021.

During this pandemic period, it is a great Initiative by the Chennai Menopause Society for having an Awareness and guidance programme, particularly for the menopausal women. A special appreciation for the team involving Coordination and organizing the webinar session.

“Menopause or ‘the change’ as it is sometimes called should only mean that a women’s reproductive stage in life has ‘changed’” Nothing else needs to change, certainly not in today’s time. We cannot stop menopause, but we can certainly replenish all the hormones which our body is beginning to produce less of. I believe that they have right to live healthy and the menopausal society paves a healthy pathway for the women who suffer from this stage of life.

Once again, a great applause for the entire team of Chennai Menopause Society for their effort on Women life style modification.

With good wishes.

Dr Kanimozhi NVN Somu

Member of Parliament (Rajya Sabha)



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Article 1

Evolutionary aspects of menopause



Dr Jayashree Gopal

Consultant Endocrinologist,
Director, DiabEndoIndia,
Institute for Diabetes, Endocrine,
Lifestyle and Metabolic Health, Chennai.

In this brief article I attempt to address the question of “how and why did menopause evolve?”

All organ systems undergo “ageing” – a decline in function as we get older. However, the reproductive system in females is unique in that it undergoes an accelerated decline. If it follows the same decline in functional capacity as other organ systems, it would be active till the age of 70 or 80 years. (1) Reproduction is the evolutionary process that allows for transfer of survival genes across generations. From an evolutionary aspect, being fertile until death, maximises “organismal” or species fitness. This is what is seen across the animal kingdom in most species, including our closest primate relatives. Menopause has been noted to occur at fifty years in captive chimpanzees, who also have a life span which matches this. (2)

Humans and whales are unique among mammals in spending nearly a third to a half of their life span after undergoing reproductive senescence or menopause. Most evolutionary mechanisms favour increased reproduction. The existence of a post-



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reproductive life span Here I shall present some of the theories around why menopause evolved and the evidences for the same.

1. Adaptive: Pregnancy is an energy intensive process, requiring an additional 85000 kcal in total (3). The occurrence of menopause allows females to be fit to look after their descendants – so-called “grandmother” hypothesis. This should be understood in the context of reproduction and childbirth in the wild where the process requires a lot of energy that might otherwise be used in self-preservation.
2. Life span artefact hypothesis: This posits that menopause evolved as a result of longer life spans of modern humans. Premodern humans are estimated to have had a life span of 50-55 years, while modern humans have a life span of 75-80 years. (4)
3. Mate choice hypothesis: In brief, this theory states that males preference for younger females leads to accumulation of infertility mutaton in older females, leading to menopause (4).
4. Oocytes pass their “shelf-life”: A recent paper studied the association between lifespan and age at reproductive senescence across 49 mammals (5). Apart from baleen whales, every other species showed a halt to reproductive capacity at a certain age. The authors postulated that this may be related to the long period that oocytes have to remain in meiotic arrest, starting from in-utero. This is a fundamental difference between males (in whom spermatogenesis continues for their whole life span) and (females (who are born with a finite stock of oocytes).
5. Another interesting paper published recently proposed that age at menopause is a relatively recent event as far as evolution is concerned; and that age at menopause is continuing to evolve. This is referred to as “shifting mate-choice shifting menopause model”. As the age at marriage/mating (pregnancy) shifts to older ages, the age at menopause will also shift to older ages. (1)

Studies about why menopause exists in humans and whether it is continuing to evolve continue to be done. In the meantime, we need to understand the hormonal & metabolic



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shifts that occur with menopause and what that implies for the future health of our bodies.

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Article - 2

Basics of Pelvic Ultrasonography in Post-Menopausal Women



Dr. S. Geetha



Post-Menopausal thin Endometrium in a 52-year-old lady (TVS)
E = 2.3mm



Endometrium in a 26-year-old lady which is trilaminar (TVS)

Ultrasound should be the first screening tool for female pelvis. It is non-invasive and without ionising radiation

Challenges in trans abdominal ultrasonography are:

- i) Increased abdominal obesity
- ii) Difficulty in filling the bladder adequately in postmenopausal women.

Challenges in trans vaginal ultrasonography are:

- i) Fear of probe insertion
- ii) Pain during probe insertion



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- iii) Difficulty to view the uterine endometrium as the postmenopausal uterus is smaller than that of the reproductive age
- iv) Positioning her for a trans vaginal scan on her back in the bed with legs raised may be painful due to osteoarthritis

Indications for pelvic ultrasound in Postmenopausal women are:

- i) Bleeding or spotting per vagina
- ii) Palpable adnexal mass with or without pressure effects
- iii) Lower abdominal pain

Techniques used are:

- i) Trans abdominal
- ii) Trans vaginal
- iii) Colour Doppler
- iv) Saline infusion ultrasonography.

Trans Abdominal Ultrasonography:



Post-Menopausal uterus in trans abdominal scan



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Abdominal ultrasound gives a global view of large fibroid and large ovarian masses which may not be seen by trans vaginal route. It is the approved mode in virgins and preferred in patients with atrophic vaginitis.

Trans vaginal ultrasonography

TVS gives high resolution images, the patients feels relieved after emptying the bladder. The patient should be made to lie down comfortably, completely covered.

Probe insertion should be gentle with liberal use of gel. As we insert the probe, start the examination from the vagina, bladder, urethra (when the bladder is partly filled), cervix, uterine corpus and fundus in the sagittal or long axis view and turn transverse to look for the ovaries and adnexa.

Endometrial thickness is measured as the maximum anterior to posterior distance in the long axis or sagittal view of the uterus. Sometimes there is a small anechoic space (fluid in the endometrial cavity is common in postmenopausal women). In this case the measurement of both the anterior and posterior distance is measured separately (excluding the anechoic space) and added.



Fluid in the endometrial cavity in a post-menopausal uterus



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Saline Infusion Ultrasonography

It is used as adjunct to trans vaginal scan in evaluating the lesions in the endometrial cavity to delineate if the thickening is focal (as in polyp) or global – (as in hyperplasia or malignancy).

Doppler study of the uterus

- i) Doppler study is concerned with the hemodynamic changes.
- ii) Pulse repetition frequency (PRF) should be set at 0.3 to 0.6.
- iii) Increased vascularity on switching on the colour is more in favour of malignancy.

Postmenopausal uterus:

Focus on the overall contour of the uterus. Look for the mobility of the uterus against the rectum.

Serosa of the uterus should be seen. In the myometrium the fibroids and adenomyosis are to be looked for.

There is a reduction, in corpus to cervix ratio in a postmenopausal woman similar to paediatric and prepubertal age. The normal postmenopausal endometrium is this less than 5 mm. Try to trace the endometrial lining from the fundus to the cervix.

International Endometrial Tumour Analysis (IETA) group described the following features.

1. Endometrial echogenicity, endometrial midline, bright edge, endometrial - myometrial junction, colour score, vascular pattern, irregularly branching vessels and colour splashes which helped to delineate the malignant from benign.



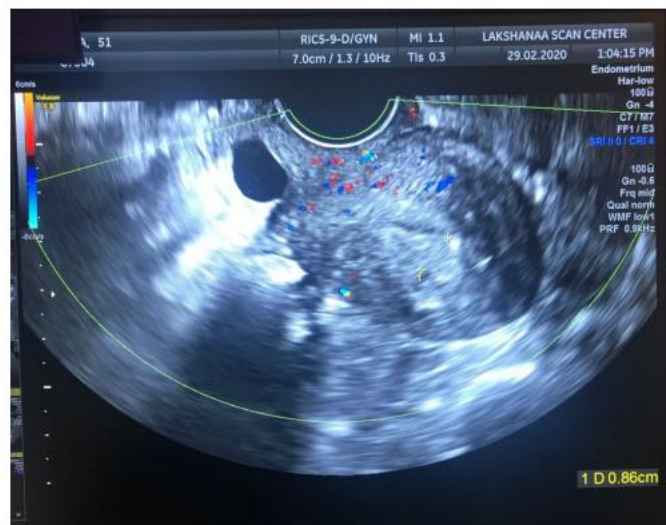
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2. The cut off of less than 5mm thickness of the endometrium is considered normal.
3. In uterine artery Doppler velocimetry of postmenopausal women with bleeding 0.93 RI (mean Resistive index) and 3.8 PI (pulsatility Index) are used as cut off to distinguish normal from abnormal pathological endometrium.



Endometrial thickness increased in a 51-Year-old lady.
Endometrium measured 8.6 mm

Postmenopausal ovaries



Postmenopausal Ovary without follicles



Ovaries with Follicles in the reproductive age



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Simple ovarian cyst of ~ 1cm has 0.3% chances of malignancy as compared to complex cyst which has 36% chance of being malignant. Adnexal masses ≥ 65 years aged female are 6 times more likely to be malignant.

Structures mimicking postmenopausal ovaries are:

- i) Bowel loops
- ii) Nabothian cysts in the cervix
- iii) Hydrosalpinx
- iv) Bladder diverticulum
- v) Pelvic varices

Colour Doppler in adnexa mass:

Colour Doppler shows promise as a non-invasive tool for characterising adnexal masses. Although a high PI and RI is suggestive of benign lesion, the findings are not specific. PI is more accurate than RI in distinguishing benign from malignant.

- Mean PI for benign lesion is 1.93
- Mean PI for malignant lesion is ~ 0.77 ,
- Mean RI for benign lesion 0.77,
- Mean RI for malignant lesion 0.5.

International ovarian tumour analysis (IOTA) gives the following guidelines which are very helpful in discriminating benign from malignant adnexal masses

- i) Easy descriptors
- ii) IOTA simple rules



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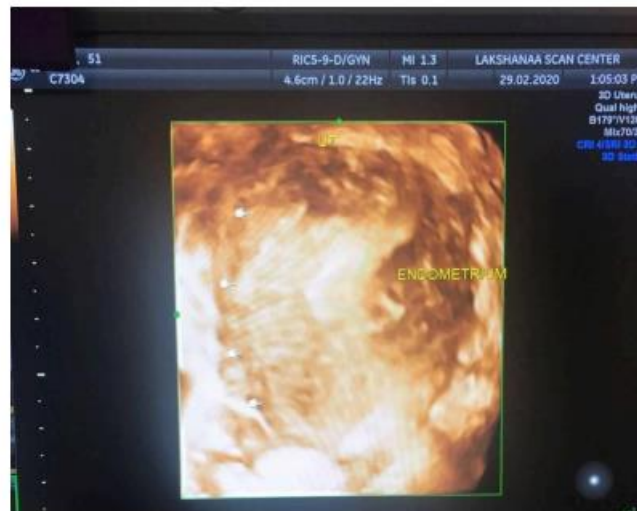
iii) Pattern recognition

If malignancy is suspected patient should be sent for second opinion scan and MRI.

IOTA adnex model (Assessment of different NEoplasias in the adnexa) is implemented electronically in various formats.

All these help in differentiating benign and malignant adnexal mass.

3D Ultrasound helps to delineate endo-myometrial junction which may be obscured in malignancy



Loss of endo-myometrial junction in the case of endometrial carcinoma

Survey of the whole abdomen should be done to complete the ultrasound in a post-menopausal woman



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Article 3

Uterine Fibroid in Menopause



Prof. N. Hephzibah Kirubamani

M.D, D.G. O, F.R.C.O. G, F.I.C.O.G, PhD, D.Sc

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Fibroids are noncancerous tumour affecting mostly women in their 30s and 40s. A woman may have just one or more fibroids and they can range in size from very small to very large. Since fibroids need oestrogen, after menopause, fibroids actually shrink and cause fewer symptoms and risk of developing newer fibroids are less. Some women do not experience symptoms and may not even know that they have fibroids. General approach in menopausal women when they are asymptomatic or have mild symptoms is to wait. Continued growth of any uterine masses and/or bleeding after menopause is worrisome and urgently warrants further evaluation for possible association with endometrial carcinoma and into Leiomyosarcoma though it is rare. It is very difficult to make preoperative diagnosis of Leiomyosarcoma as there is no reliable pelvic imaging or biomarker. However, a degenerative change within the uterine mass and an increased LDH level, when present, should suggest consideration of the diagnosis of



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leiomyosarcoma. If symptoms of fibroid affect the quality of life in menopause, hysterectomy was the treatment of choice. Today, however, we have medical options that ameliorate these symptoms and reduce the size of the fibroid

Postmenopausal Fibroids and Obesity: The increased adiposity seen in obese women creates a higher estrogenic environment from the peripheral conversion to estrogen predisposing them for growth of Uterine fibroids even after the menopause. (1)

Fibroids and aromatase enzyme expression: Fibroid cells express aromatase enzyme, which is present in subcutaneous fat, and locally synthesizes estrogen from androgenic substances such as androstenedione and this is another reason for fibroids to grow after Menopause. This is the reason to suggest aromatase inhibitors in the treatment of symptomatic of fibroids. (2)

Fibroids & Menopausal Hormone Therapy (MHT):

Several prospective clinical trials have shown that Uterine Fibroid growth peaked within the first two years of MHT and it then decreased after the third year (3). Another study by W.C.ANG et al suggested that transdermal estrogen and high doses of medroxyprogesterone acetate (MPA) (5mg) may put patient at more risk for increase in Uterine Fibroid size (4) Study done by Chang et al concluded that women who may benefit from MHT should have ultrasound follow up every three months. If the size of Uterine fibroid is increased, MHT should be discontinued (5) Some studies have demonstrated an increase in size of pre-existing asymptomatic fibroids and formation of new fibroids with higher doses of progestogen in combination therapy. The finding of low resistance index in uterine arteries of women with asymptomatic fibroids is associated with an increased risk of fibroid growth, and thus making the measurement of pulsatility index of uterine arteries



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a possible screening tool before initiating hormone therapy in menopausal women with fibroids. A literature search for studies evaluating the effects of hormone therapy in menopausal women with asymptomatic fibroids demonstrated variable effects of hormone therapy on the volume and size of the fibroids. Although the effect of hormone treatment is variable and statistically insignificant in many cases, the newer selective estrogen receptor modulators having tissue-specific estrogen agonistic and antagonistic actions such as Raloxifene have a favorable clinical profile and may be better alternatives in women with asymptomatic fibroids. (6)

Management of postmenopausal women with Fibroids:

Aromatase inhibitors to suppress endogenous estrogen levels may prove to be useful in the treatment of fibroid related uterine bleeding in postmenopausal obese women.

Parsanezhad et al (7) concluded in his study that Letrozole had the same efficacy and fewer side effects as compared to the GnRH group on uterine leiomyoma for uterine bleeding in postmenopausal women

Selective Estrogen Receptor Modulators: Study by Palomba concluded that Raloxifene in postmenopausal women with Uterine Fibroids suppressed the severity of AUB and decreased the size of uterine fibroids (8). Selective estrogen receptor modulators such as Raloxifene have a favorable clinical profile and may be better alternatives in women with asymptomatic fibroids since it has tissue-specific estrogen agonistic and antagonistic actions

Tibolone: W C. Ang et al concluded that Tibolone can be used to reduce menopausal symptoms instead of MHT as most studies have shown that it does not increase Uterine Fibroid size



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Uterine artery embolization (UAE): Chrisman et al (9) conducted a retrospective study to determine the efficacy of UAE for postmenopausal symptomatic women. Their studies demonstrated that 88% of women with UAE had positive outcomes. thus making UAE a good alternative for hysterectomy (10)

Conclusion:

It is still not clear why some Uterine Fibroids regress and others do not during this stage of life, However, hormonal regulations are thought to be involved. So far, it is quite challenging and may be nearly impossible to differentiate the Uterine Fibroids and leiomyosarcoma through imaging alone. LDH levels are invariably elevated in patients with leiomyosarcoma with increased mitotic rates. Woman with presumed leiomyoma with degenerative change within the uterine mass and an increased LDH level is not likely to be a candidate for conservative treatment. Thorough evaluation is of utmost importance to rule out pathologies with similar clinical presentation to give appropriate individualized treatment.

To-date, the most effective treatment is hysterectomy in this age group, although there are other promising therapeutic options under investigation. More research is still needed

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Article - 4

Surgical management of Cervical Carcinoma – Recent advances



Dr. Anbukkani Subbian

DGO,DNB,MRCOG (London)

Gynec Oncologist, Kovai medical center
& Hospital, Coimbatore

Cervical carcinoma is the second most common cancer in Indian women, with almost one lakh new cases diagnosed every year. Most women still present in advanced stages, due to lack of symptoms in early stages and lack of awareness and organised screening in most areas across the country.

With the advent of HPV vaccination combined with organised screening, a number of countries around the world are looking towards the possibility of cervical cancer eradication. In this regard, the WHO gave a clarion call in Nov 2020 towards this goal. The objective was a "World without Cervical cancer by 2030" or in more measurable terms an incidence of $<4/100,000$ women.



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The ways to achieve this was outlined as follows:

- To achieve vaccination for more than 90% of girls aged 15years or younger.
- To screen 70% of women with a high performance screening test at 35years and at 45years.
- To promptly treat more than 90% of women diagnosed with preinvasive and invasive lesions of the cervix

The first step in the management of confirmed cervical cancer is establishing the stage and extent of the disease. The staging was traditionally done by Clinical assessment. The staging, now, however includes radiological as well as pathological evaluation.

Changes in current FIGO staging:

- The horizontal dimension in substaging for Stage IA has been removed. Only the depth of the lesion is taken into account now. Stage IA1 is when the depth of invasion is less than 3mm and Stage IA2 is when the depth of invasion is between 3-5mm. More than 5mm is Stage IB.
- Stage IB is now divided into three substages. Stage IB1 is when tumour size is more than 5mm but less than 2cm, Stage IB2 is when the size is between 2-4cm and Stage IB3 is when the tumour size is more than 4cm.
- Stage IIA is now divided into IIA1- Tumour size less than 4cm and IIA2 - Tumour size more than 4cm.
- Stage III is now divided into three substages. Stage IIIA and IIIB remain the same. Stage IIIC now includes lymphnode involvement which is seen on imaging (CT/MRI or PET) or when confirmed by pathology (Biopsy or FNAC). This is denoted by the notation p (for pathology) or r (for radiology) next to the stage (For Eg. IIIC1(r))



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This is the first time lymphnode involvement has been included in staging of cervical cancer. Stage IIIC is further categorised into IIIC1 – involvement of pelvic nodes and IIIC2 – involvement of paraaortic nodes.

The standard surgical management for early cervical cancer is Radical Hysterectomy (the extent of radicality depends on the stage) with pelvic lymph node dissection. Other options in the surgical armamentarium include Conization, Simple or Radical Trachelectomy. The indications for these procedures are as follows:

Stage IA1, without LVSI (lymphovascular space invasion) –

Stage IA1 is a diagnosis following conisation or following inadvertent hysterectomy only. It cannot be diagnosed with certainty following a punch biopsy.

If the conisation specimen shows a tumour with depth of invasion less than 3mm and the margins are free, then this patient can be observed or advised an Extrafascial hysterectomy (if not desirous of fertility preservation).

If the margins are positive, then the recommendation is to perform a repeat conisation (if fertility is desired) or a Modified Radical hysterectomy (if fertility not desired). Pelvic node dissection should be included in the surgical plan if invasion >3mm as it carries a 3-5% risk of pelvic node metastases.

The recommendation for negative margin is tumour free margin of atleast 3mm.

Stage IA1 with LVSI and Stage IA2 (depth of invasion 3-5mm)-

All cases of Stage IA1 with LVSI and Stage IA2 need surgico-pathological assessment for lymph nodes involvement. The decision for further treatment plan depends on the following factors



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- Desire for fertility
- Margin status if diagnosed on conisation.

If desiring fertility -

Margins free on conisation – These patient will be recommended a pelvic node dissection alone.

Margins are positive on conisation – These patients will need a repeat conisation or Trachelectomy along with the pelvic node dissection.

If the patient does not desire fertility - Management offered is Modified Radical Hysterectomy with pelvic node dissection.

Stage IB1 (Tumour size more than 5mm but less than 2cm) and IB2 (Tumour size more than 2cm but less than 4cm)

Management of the cervical tumour

- These patients are offered Radical Hysterectomy if not desirous of fertility.
- If the patient desires fertility preservation, Radical Trachelectomy may be offered. This is ideal for Stage IB1, but may be offered for Stage IB2 as well if patient is well informed of risks.

Radical Trachelectomy may be done by abdominal or vaginal route. It involves the removal of the cervix and vaginal cuff alone with lateral dissection for removing paracervical tissue with preservation of the body of the uterus. The lower part of the uterus is then attached to the upper vagina and an encerclage suture is placed at the lower end of the uterus. The delivery following a successful pregnancy is done only by a Caesarean section as the encerclage is left in situ for future pregnancies.



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Management of lymph nodes

All tumours in this group require lymph node assessment. Conventionally, lymph nodes were assessed by pelvic node dissection. The newer, less morbid option available is Sentinel node dissection. This procedure helps to avoid the short and long term morbidity of lymph node dissection. RCTs have established the safety and reliability of Sentinel node dissection. The ideal indication for sentinel node dissection is when the primary tumour size is less than 2cm, but it may be performed upto tumour size <4cm.

Sentinel node procedure.

Sentinel nodes are the first draining node from any organ. Sentinel nodes from the cervix are usually found in the obturator nodes or medial or ventral to the iliac vessels.

Identifying the sentinel node involves injection of a dye (Methylene blue or Radiocolloid dye or Indocyanin green(ICG) into the cervix. The flow of dye through the lymphatics from the cervix is then tracked by naked eye (for methylene blue) or using Near Infra Red Fluorescence camera (for ICG) or Gamma probe (for Technitium 99 Radiocolloid). The first node that lights up on NIR camera or fills with blue dye is the sentinel node. Care should be taken to identify the first node/s soon after injecting the dye as with time the dye will flow into the draining lymphatics and fill up several nodes in the chain. This takes only a few minutes sometimes.

Experience and validation of the procedure with atleast 25-30 trial cases is essential before a center can confidently replace pelvic lymph node dissection with sentinel node dissection. Not establishing a suitable protocol and picking the non sentinel nodes may potentially mean that a node metastasis could be missed. For cervical malignancy, sentinel nodes should be identified on both sides of the pelvis. If one side is not identified then it is essential to perform a pelvic node dissection on that side.



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The other important aspect of sentinel node assessment is the pathological assessment of the sentinel node. Ultrastaging of the node by the pathology team is recommended to detect micrometastases which may have an implication in planning adjuvant treatment.

Figure 1: Options of SLN Cervical Injection Sites^c

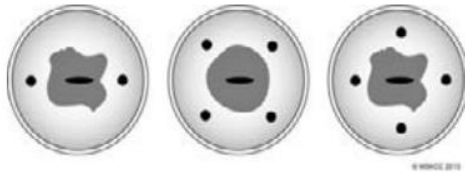


Figure 2: SLNs (blue, arrow) After Cervical Injection Are Commonly Located Medial to the External Iliac, Ventral to the Hypogastric, or in the Superior Part of the Obturator Space^c



Image taken from NCCN guidelines (<https://www2.tri-kobe.org/nccn/guideline/gynecological/english/cervical.pdf>)

Management of Stage IB2/IB3/IIA1 -

Surgical management involves Radical Hysterectomy with pelvic node dissection with consideration for paraaortic dissection as well as risk of lymph node metastasis increases with increasing tumour size. Sentinel node dissection may be offered depending on the tumour size (Usually upto 4cm).

The alternative option is to go for primary chemoradiation with External Pelvic Radiation and Concurrent Chemotherapy followed by Brachytherapy. The decision of surgery Vs Chemoradiation will depend on the Stage of disease, size of the tumour and patient's general condition and wishes.



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Management of Stage IIA2/IIB/III/IV

Chemoradiation is the primary treatment option and surgery is offered very rarely. It may be offered as in a salvage setting when there is residual disease following Chemoradiation or for symptomatic relief (for eg. Stage IVA with VVF and no evidence of distant metastasis, exenteration maybe a option).

Minimally Invasive Surgery (MIS) in cervical cancer management.

Laparoscopic or Robotic route of Radical Hysterectomy used to be offered to patients with early cervical cancer. With the results of the LACC trial and several other studies following this which showed a lower survival and higher recurrence for MIS compared to Open Radical Hysterectomy, the role of MIS has become controversial. As it stands, MIS is not offered by most specialists. That may be the case until more data comes out in support of MIS.



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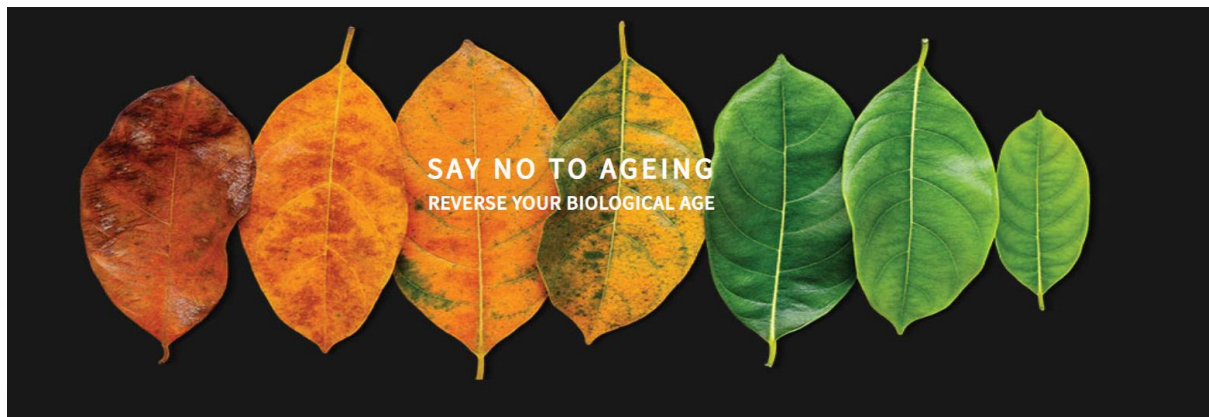
Article 5

Reversal of Aging



Dr. Amuja Chorapur MD, DGO

President Indian Menopause society 2021



In simple terms, aging is defined as the process of becoming older.

Most evolutionary biologists define aging as an age-dependent or age-progressive decline in intrinsic physiological function, leading to an increase in age-specific mortality rate (i.e., a decrease in survival rate) and a decrease in age-specific reproductive rate (1)



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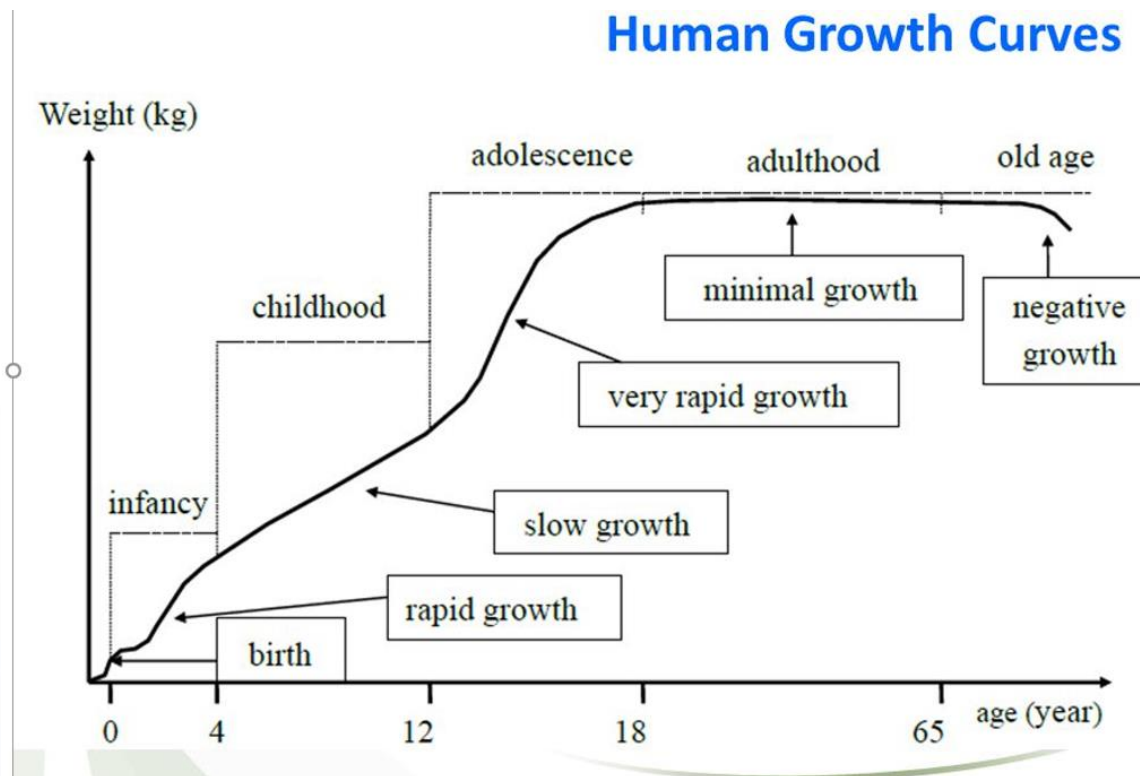
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At the biological level, ageing **results from the impact of the accumulation of a wide variety of molecular and cellular damage over time**. This leads to a gradual decrease in physical and mental capacity, a growing risk of disease, and ultimately, death. The concept of successful ageing has induced much debate.(2)

World progresses by reproduction, because it's not in nature's best interest to perfectly repair our bodies. The main thing is to keep us reproductive as long as possible, and then let our bodies deteriorate. Human cell divides 50 times and stops – permanently, that is senescence (3). By Wear and tear tissues are damaged, which is not possible to repair completely.



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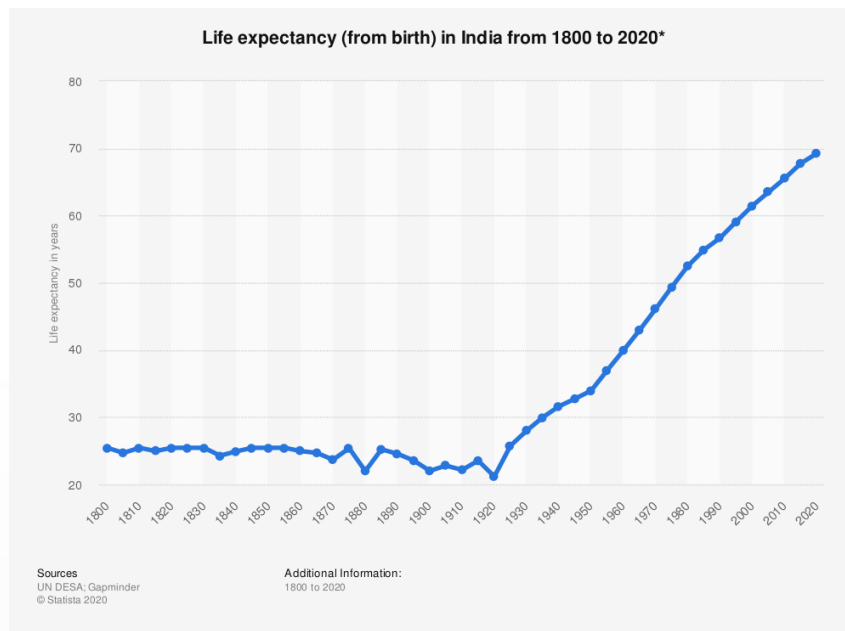
Wrinkles on the skin, gray hair, poor physical and cognitive health are some of the common manifestations of aging.

Why do we talk about Reversal of aging?

As longevity of human beings is increasing, 1/3 of woman's life is spent in post-menopausal state.

Apart from external features of aging, Non communicable diseases (NCDs) like cardiovascular disease, Hypertension, Diabetes mellitus, obesity, osteoporosis and cancers increase with aging. post-menopausal oestrogen deficiency accelerates NCDs.

By 2026 ,400million women in India are more than 45 yrs of age(4)





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Can Science Stop Aging?

- Aging is both universal and inevitable.
- It is characterized by the declining ability to respond to stress, loss of viability and increase in vulnerability
- Aging is of two types
- 1.Chronological aging



2. Biological aging



How we age is beyond our control. It's primarily influenced by genetics.

Effect of genetics on aging is only 25%, epigenetics plays a major role i.e 75% of times. The fact remains that healthy aging and longevity is largely influenced by our environment – that is, what we eat, how much we exercise, stress and smoking, where we live and the compounds and toxins we are exposed to throughout our lifetime.



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And research from Sweden's Karolinska Institutet (*resource no longer available at www.nature.com*) – published in 2013 – suggested that the aging process is influenced by mitochondrial DNA that we inherit from our mothers.

Hall marks of Biological aging are (5)

1. Cellular senescence
2. **Telomere** – Shortening
3. DNA damage
4. Immune senescence

Every time a cell divides, the telomeres get shorter. After they get too short, the cell no longer can divide and becomes inactive or dies. This process is related with aging and age related diseases. Evidence clearly shows that people with long telomeres age healthier & live longer

Telomeres are the nucleotides on the ends of chromosomes. They keep the ends of chromosomes from deteriorating and fusing with a nearby chromosome. Essentially, telomeres dictate how quickly cells age and die.

Telomere shortening leads to DNA damage. DNA repair is important in preventing senescence. Epigenetics play a part in mutation of damaged DNA synthesizing enzymes, leading to immune senescence,

Scientists have discovered that the higher a person's chronological age, the shorter their telomeres. One study found that people with shorter telomeres were more likely to have an early death or develop a disease or neurodegenerative disorder. (6) that maintaining a healthy lifestyle can actually reverse aging by lengthening telomeres, **During normal metabolism reactive oxygen species (ROS) formed are scavenged by healthy mitochondria in the cell.**

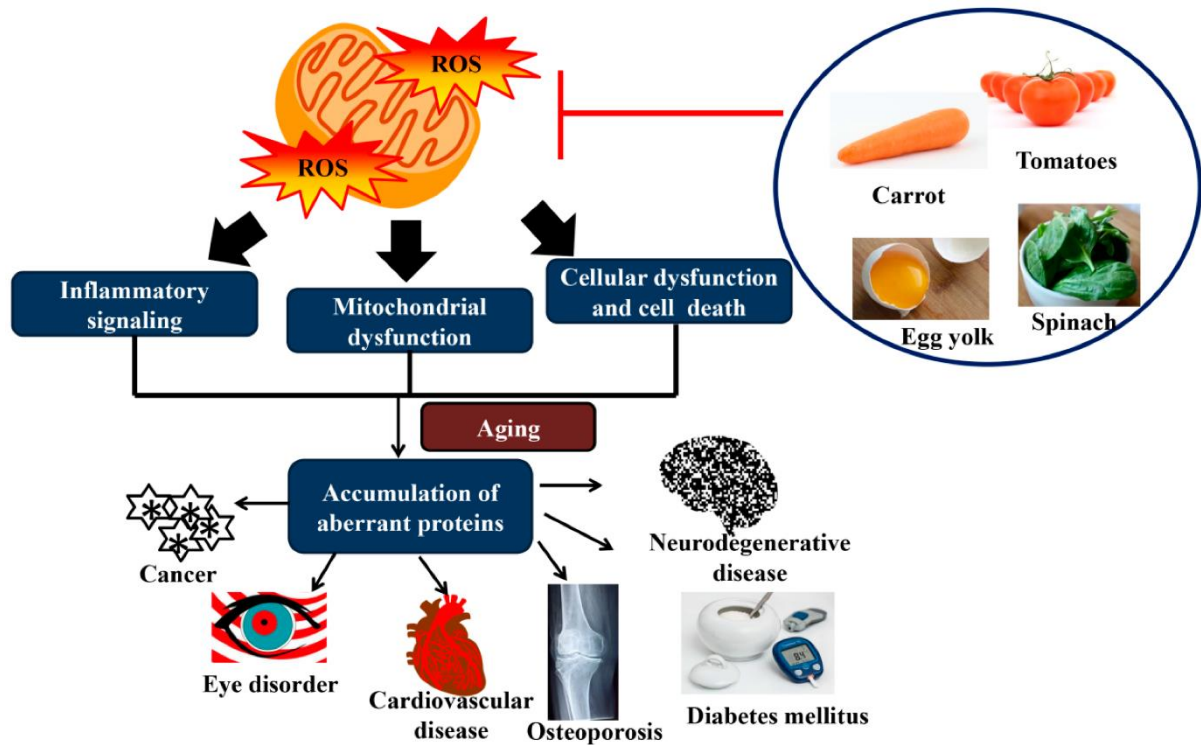


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Immune senescence. DNA mutations leads to mitochondrial damage and ROS accumulation and consequent NCDs.



ROS can damage the mitochondria's DNA (mtDNA) and proteins, and the mutant mtDNA in turn are more liable to produce ROS byproducts. Therefore a positive feedback loop of ROS is established. With age the number of mutant mtDNA increase and the mitochondrial functions decline, leading to an increased production of ROS

The increased generation of ROS can cause lipid peroxidation, protein damage, and several types of DNA lesions in cells. Therefore, ROS are considered important factors in the mechanisms of such diseases as diabetes, cancer, atherosclerosis, heart attacks, Alzheimer's disease, as well as in aging.

Conclusion

1. One cannot reverse the aging, but effects of aging can be reversed.
2. Genetics cannot be changed so tackle Epigenetics. Promote healthy aging by lifestyle changes.
3. Sleep (at least, oral hygiene, nutrition and exercise help to maintain chromosomes so that cells could replicate longer and thus stay alive longer.. Specifically, sleep seven hours and exercise 30 minutes a day, five days a week make miracles,

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Article - 6

MHT after WHI



Dr R Premalatha

M.D, D.G.O, DNB, F.R.C.O.G, F.I.C.O.G

There has been marked fluctuations in opinions concerning the merits and risks of postmenopausal hormone replacement therapy. In July 2002, menopause management faced a major turning point when the first data from the Women's Health Initiative (WHI) trial were released.

The Women's Health Initiative Trial

The Women's Health Initiative on the hormone replacement trial assessed the long-term effects of hormone therapy (HT) in postmenopausal women, designed to include a follow-up period of nine years, the primary outcome being prevention of coronary heart disease and fractures without increasing breast cancer risk. Women with uterus were randomised to receive combined oestrogen and progestin (CE0.625mg/d+MPA2.5mg/d) or a placebo and without uterus were randomised to receive unopposed oestrogen (CE0.625mg/d) or a placebo. About



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27,500 women aged 50 to 79 are participated in the HRT. The study of combined oestrogen/progestin was ended early in July 2002 due to findings of increased risk of coronary heart disease, breast cancer, stroke, and thrombo embolic complications, compared to placebo. The oestrogen trial was halted in February 2004, after an average follow-up period of 6.8 years, on the basis that unopposed oestrogen did not reduce the risk of heart disease. As a consequence, large reductions in HT prescriptions ensued.

WHI was criticized for its conclusions as far as cardiovascular disease is concerned because of serious defects regarding design of the trial. The average age at recruitment in the trial was 63.2 and majority of the women in the study were overweight (average BMI of 28.5), 10% were aged 50-54, 20% were aged 55-59, 45% were aged 60-69 and 25% were aged 70-79. If the adjusted CIs were taken into account, then the increase in adverse events was significant only for deep vein thrombosis. The second arm demonstrated that the use of oestrogens was not correlated to an increase of neither breast cancer incidence nor cardiovascular disease. A closer look at the results of the WHI trial reveals that the use of HRT for 5 years not to be considered deleterious for the appearance of breast cancer, cardiovascular diseases, strokes, and pulmonary embolisms.

The investigators of WHI 2004 published a further analysis of the trial, stratifying results by age, and an extended follow-up, revealing that starting HT in post-menopausal women less than ten years from last menstrual period appears to have less risk and additional benefits for those initiating HRT in the 50-59 age group, tend to have a lower risk from heart disease; a lower risk of death from any cause; no clear increased risk from stroke. They also show a general increased risk for those starting HRT after the age of 60.



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A cumulative 18-year follow-up analysis published in 2017, found that, among 27,347 postmenopausal women who had originally participated in the WHI hormone therapy trials, interventions using oestrogen-plus-progestin and oestrogen-alone were not associated with increased or decreased risk of all-cause, cardiovascular, or total cancer mortality. The WHI long term follow up reported that women using oestrogen only HRT had a reduced risk of breast cancer incidence and mortality but those on combined HRT had a slight increased risk of breast cancer incidence but no increased risk of mortality. Increase in risk for breast cancer with combined HRT in WHI was much less than initially reported and now equates to 4 extra cases per 1000 women after five years.

The pendulum swung back from its peak negative sentiment following more detailed data from the WHI study that demonstrated the importance of the age at initiation and the good safety profile of HRT in women younger than 60 years and IMS recommendations to reserve HRT for very symptomatic women, and to limit its use to the ‘shortest duration needed’ and to ‘the lowest effective dosage’.

2016 IMS Recommendations on women’s midlife health and menopause hormone therapy

The term MHT has been used to cover therapies including oestrogens, progestogens and combined therapies. MHT remains the most effective therapy for vasomotor symptoms and urogenital atrophy. The use of topical oestrogen is recommended for the treatment of GSM. Other menopause-related complaints, such as joint and muscle pains, mood swings, sleep disturbances and sexual dysfunction may improve during MHT. Quality of life and sexual function may also improve. Progesterone or Low-dose OCP can be used in menopause transition phase for relief of symptoms.



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Postmenopausal osteoporosis is characterized by diminished bone strength with the risk of sustaining a fragility fracture. MHT is an appropriate therapy and decreases the incidence of all fractures, including vertebral and hip fractures, even in women not at high risk of fracture. Women experiencing a spontaneous or iatrogenic menopause before the age of 45 years and particularly before 40 years are at higher risk for cardiovascular disease and osteoporosis and may be at increased risk of affective disorders and dementia. MHT may reduce symptoms and preserve bone density and is advised at least until the average age of menopause.

In women aged less than 60 years and/or within 10 years of menopause with no evidence of cardiovascular disease, the initiation of hormone therapy could be expected to reduce the incidence of coronary heart disease and all-cause mortality. Currently, it is not recommended to initiate MHT solely for primary or secondary prevention of coronary heart disease.

Pre-MHT work-up and annual follow-up are essential when prescribing HT. A full gynaecological assessment is mandatory prior to starting HT and at regular intervals thereafter. Self-breast examination is advised monthly. The dose and duration of use of HT should be individualized and a risk-benefit assessment carried out annually. Follow up after a month, 3 months, 6 months then annually. Mammogram or US, where available should be carried out 1-3 yearly if the initial mammogram is normal



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Conclusion

Starting MHT in early menopause within 10 years after menopause, and in women younger than 60yrs found beneficial effect on cardiovascular disease and decrease in all-cause mortality. MHT in symptomatic women during the window period of opportunity has benefits outweighing risks.



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Article 7

Sexual Health after Menopause



Dr. Sudhaa Sharma

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Secretary General, IMS



Dr. Pallavi Sharma

Assistant Professor
Kathua Medical College

Human sexuality is multifactorial and is influenced by various social, psychological, biological and interpersonal aspects. It is not only a basic human right but also an important component of women's health. The prevalence of sexual activity declines with advancing age and for many women abstaining from sexual activity is considered as a norm. With the increased life expectancy worldwide; women spend approximately one third of their lives being menopausal which therefore demands more insight in understanding the etiology, the effect and management modalities in addressing this subject. Personal experiences including age at menopause, type of menopause (natural or surgical), mental and physical health, previous life experiences, partner related issues collectively affect various aspects of sexual health.

The Diagnostic and Statistical Manual of Mental Disorder, 5th Edition defined four categories of FSD3: Female sexual interest and arousal disorder, Female sexual orgasmic disorder, Genito-pelvic pain / penetration disorder, Substance/



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medication-induced sexual dysfunction [1]. It has been proposed that problems should be present for a minimum of 3 months and at least 75% of sexual experience; although this requirement is derived from expert opinion, not research evidence [2]

Sexual desire implies to the interest in sex. Hypoactive sexual desire is the most common sexual complaint among women. Though sexual desire fades with increase in age in both sexes, women are two to three times more likely to be affected by a decline in sex drive as they age. Desire has three interrelated components first being the drive which is the biological component, second being beliefs, values, and expectations about sexual activity and third being motivation. Since it is driven by emotional and interpersonal factors, motivation is the most complex and important component of desire.

The first noticeable change associated with menopause is often reduced vaginal lubrication during arousal. Although sexual desire triggers arousal; some women may not be able to navigate with this emotion further in the sexual act. Arousal involves the physical signs of sexual readiness and is characterized by enhanced blood circulation to the vulva, the clitoris, and the vagina. The clitoris is less sensitive during the menopausal years due to reduced estrogen levels and changes in vascular and nervous systems. The local changes in the form of vaginal dryness and atrophy can further lead to diminished orgasm which may be less intense, take longer to achieve or may not happen at all.

The type of sexual dysfunction can be diagnosed based on the complaints of the patient along with a medical, surgical, personal and sexual history. Not many women would like to talk about their concerns; thus the evaluation involves a compassionate and friendly approach by the health care provider. Questioning should lead to identification of sexual dysfunctions (e.g. sexual complaint plus



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distress), distinguishing subtypes of sexual dysfunction, duration of symptoms and the temporal relationship of each type of sexual dysfunction to the other, and identifying associated modifiable factors.

Physical examination starts with a general inspection of the patient and the vital parameters followed by systemic examination of thyroid, breasts and abdomen, and presence and distribution of pubic hair. The characteristics of the clitoris including any adhesions or abnormalities under the clitoral hood, labia minora, majora and anus are evaluated. Vulvar skin conditions that produce adhesions, erythema, ulcers, leukoplakia or pustules, papules and nodules may be confirmed. Gentle separation of the labia minora is performed to evaluate the urethra, hymenal area, vestibule, and posterior fouchete. The vaginal caliber and pelvic floor musculature should be assessed for signs of hypertonicity, vaginismus and trigger points. Appropriate sized speculum can be introduced for assessment of cervical and vaginal status. Recommended laboratory tests for sexual health are minimal unless a specific history points to clinical concerns.

Treatment of the sexual problem involves a combination of medical and psychotherapeutic interventions since more than one factor may be contributing to sexual dysfunction. A good counseling session along with various life style and behavioral modifications may some times suffice. Sex therapy is a specialized form of counseling or psychotherapy using specific techniques to address problems of sexual desire, arousal, orgasm, and pain.

Clinical treatments could be in form of local vaginal applications, systemic hormonal and non hormonal medications. Traditional options include vaginal estrogen therapy, vaginal moisturizers, and lubricants for sexual intercourse. More recently, an intravaginal preparation of dehydroepiandrosterone (DHEA) has been found to be efficacious, when used daily, and approved in the United



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States and Europe for the treatment of moderate to severe dyspareunia, a symptom of VVA. Unfortunately, less frequent use (twice weekly) has not been shown to be clinically effective [3]

The hormones widely studied for female sexual dysfunction are estrogens and androgens, with some studies also having examined the effects of DHEA, oxytocin and progesterone. Testosterone, administered transdermally as a cream, patch or gel, or as an implanted pellet, improves sexual wellbeing in postmenopausal women with low sexual desire associated with distress [4]

Systemic non hormonal therapies include Ospemifene, a selective estrogen receptor modulator orSERM , although a systemic non-hormonal therapy, it acts locally as an estrogen. Flibanserin is currently the only United States Food and Drug Administration (FDA)-approved medication for generalized, acquired HSDD in premenopausal women. Other CNS-active agents, approved for other indications, have been used off-label for the treatment of HSDD despite limited efficacy and safety data. Buspirone, which reduces serotonin inhibition, is another off-label treatment that has been used for antidepressant associated sexual dysfunction. Potential future therapies includebremelanotide and combination therapies: testosterone/sildenafil, testosterone/buspirone and bupropion/trazodone. [5]

To summarize sexual health is important in the menopausal years and merits a compassionate approach and evaluation. Management modalities can vary depending on the type of sexual dysfunction and the needs and expectations of the woman.



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Article 8

Health & Social Aspects of Ageing



Dr. G. S. Shanthi,
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Ageing is a universal and inevitable process. The ageing process varies from person to person and the aim of every senior citizen will be to age gracefully. The People age at different rates, which depend on their health and co-morbidities. The factors that influence ageing are genetic (non-modifiable) and lifestyle factors (modifiable). The older person should focus on the lifestyle factors to maintain healthy aging. The current life expectancy of an Indian elderly woman is 70.7 years and elderly man is 68.2 years. The women outlive men and hence more widows than widowers are present in the society. Older women after menopause are at risk of developing many diseases due to lack of protective ovarian hormones. Dignity and functional independence are considered as core concepts of successful aging and hence the prime concern of elderly is to maintain their health. Old age is a time for peace and rest but actually many health issues accompany old age.



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The common problems faced by the elderly include:

- (i) Physical health problems (Hypertension, Diabetes Mellitus, Coronary Heart Disease, stroke, kidney disease, Osteoarthritis, Malignancy etc.)
- (ii) Mental health disorders (depression, Anxiety, Insomnia, Dementia)
- (iii) Social problems like Isolation, loneliness, Poverty, Elder abuse and financial dependency.
- (iv) Vision and hearing impairment is usual in old age and they have to be identified early and appropriate corrective measures to be adopted
- (v) Geriatric syndromes refer to symptom presentation that is common in old age. They are Impairment of Cognition (dementia), Imbalance & Falls, Incontinence of Urine, Immobility, Delirium, Sarcopenia and Frailty.
- (vi) Other problems include Parkinsonism, osteoporosis & fractures, Pressure sores, Prostatic hypertrophy (older men), hypothyroidism, malnutrition etc.

In the present living conditions, joint family system is breaking down and young people migrate to different places or countries leaving behind their elderly parents. This necessitates the elderly people to live independently without the support of their children. Hence it is imperative to maintain the physical and psychological health by proper screening for diseases, appropriate medical management to treat the diseases and prevent complications. Continuous medical care and periodic health checkups are very important in elderly. The healthy elderly without any co-morbid illness also have to preserve their health by proper nutritious diet, physical exercise, Yoga and meditation.

Breakdown of joint family system leads to social isolation and loneliness. Many studies indicate that loneliness leads to physical and psychological issues



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especially depression and suicidal tendencies. Hence it is important to stay connected with the family members, relatives and friends. Family care giving and social support are essential to maintain the psychological health of the older persons. Within the family, intergenerational bonding is mutually beneficial for the young grand children and the older grandparents. The experience and knowledge of the older person may be useful for correct decision making in the family.

Also the older persons have to maintain the financial independence by proper savings for their future health needs and for other expenditure. Health insurance schemes for senior citizens are very few and it has to be extended to the elderly persons, which will be of great help to them. For the lower socioeconomic group of elderly, the government and the policy makers have the responsibility to make suitable provisions for this vulnerable group for proper and accessible health care, which is very essential. The social security schemes like Indra Gandhi Old Age Pension scheme for people below poverty Line (BPL), Annapurna Scheme (10 kg food grains per person per month free of cost), Pradhan Mantri Vaya Vandhana Yojana scheme through LIC of India with assured interest rate of 8% per annum, Income tax rebate for senior citizens are some of the available useful schemes.

Ageism is discrimination based on chronological age and devaluation of the elderly in society. It includes negative beliefs, attitudes and stereotypes about elderly persons. This leads to under-estimation, elimination and hostile behavior of the young towards the old. Hence ageism has to be combated and a harmonious atmosphere has to be provided for the elderly. The society should provide an elder friendly environment for them to live comfortably inspite of their disability. The outdoor environment, transport, housing have to be designed in such a way it is comfortable for the older people. Social participation of the elderly has to be encouraged. Equal opportunity has to be provided for them in terms of decision



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making in the family affairs and towards their own health needs. During critical illness, the choice and preference of treatment can be obtained in advance and documented (Advanced directives). The decision-making rights have to be provided to the sane elderly and in case of cognitive impairment the offspring have the rights to decide.

Social aspects of Aging include changes in social roles, which takes time for its acceptance. The elderly easily become victims of fraud & crimes due to insecurity attributed to loss of physical strength and mental capacity decline. Proper protection for safe living has to be provided. Due to loss of spouse, siblings and friends they slowly tend to isolate themselves in the absence of proper support and care by the children. This leads to decline in health status, depression and dependency. This paves way for Elder Abuse, which can be physical abuse, verbal abuse, psychological abuse or financial abuse by the caregivers. Educating the Children to respect the elders in the family and in the neighbourhood can minimize elder abuse. The older females are the victims in most instances and the perpetrators are the family members. The Elder Abuse awareness day is observed on June 15th every year in schools & colleges to make the children realize that it is their duty to take care of their parents in old age, help them at times of needs, treat them respectfully and obey them. Inculcating the correct thoughts and behaviour in young minds and teaching the value of tradition and culture will bring transformation easily. In India in 2007 “The Maintenance and Welfare of parents and Senior Citizens act” was framed by the Ministry of Law & social Justice to ensure safety of the Elders.

Social networking and participation will improve the wellbeing of the elderly and preserve the cognition. Interventions to prevent social isolation include:



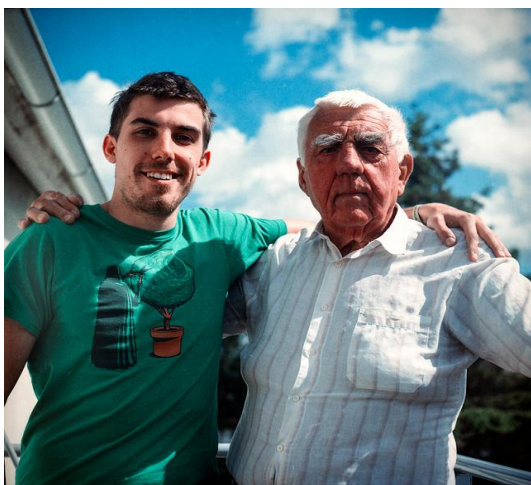
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- (i) Forming groups of 7 – 8 members/friends who can meet regularly and share their thoughts, discuss the common issues & find solution, updating current affairs etc.
- (ii) Becoming a member of a local Senior Citizens' group and interaction
- (iii) Volunteering in the Social activity group of the locality and offer guidance & participation to the possible extent
- (iv) New Learning or continuing a hobby like gardening, swimming, rearing pet animals, reading, listening to music etc. (However advancing age severely limits mobility and persuasion of hobbies)
- (v) Those who are religiously inclined should be encouraged to visit their places of worship regularly.
- (vi) People with restricted mobility can also be socially connected through Phone calls/video calls to their family members, relatives and friends.





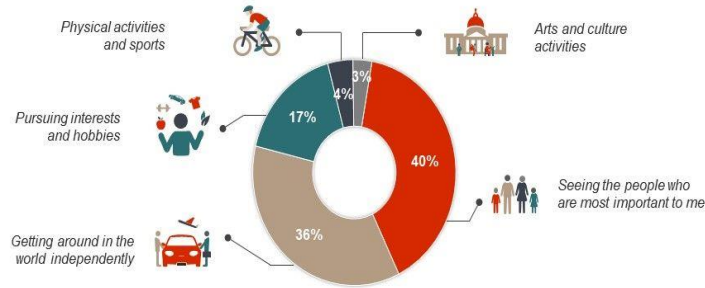
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Hobbies



Creative Hobbies

This slide is 100% editable. Adapt it to your needs and capture your audience's attention.

Sports

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Social networks contribute to wellbeing of elderly by promoting socialization & companionship, elevating the morale and life satisfaction, buffering the effects of stressful events, providing confident & facilitating coping skills.

Thus in this context of population ageing, the elderly have the responsibility of social participation, achieve healthy ageing, maintain physical & cognitive independence and support the productivity of the nation.

Article - 9

Mental Health and Homoeopathy at Menopause Transition



Dr Khushali Gambhir,

BHMS, MD (Homoeopathy)

Numerous studies on Menopause transition indicate women being more susceptible to Psychiatric illness, especially having a history of mood disorders. This may be attributed to the decline in hormones, the presence of physical complaints, or the natural stage of life where a woman is sandwiched between senior caregiving and handling an empty nest.

Mental health issues are frequently seen in Complementary and Alternative medicine clinics. Emphasis on mental symptoms for any complaint has been a focus in homoeopathy from its inception. No two individuals are alike and the most effective way of differentiating and customizing their treatment is through understanding their mind, their disposition, pre existing tendencies and paying attention to the nuance of each symptom. Thus, it is especially useful in menopausal years as Menopause transition is a different experience for each woman.



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Some mental health conditions seen in a homoeopathic clinic through menopause transition are:

Mood disorders –Moods at this phase can vacillate from anger to sadness. Mood shift can be as mild as melancholia or a cluster of symptoms like complete loss of interest, fatigue & persistent sadness lasting weeks giving a diagnoses of Clinical Depression. Remedies like Ignatia are particularly useful when there is rapid changeability in mood, Sepia, when there is depression and indifference to the family, while Nux Vomica helps with anger and rage.

Insomnia –Predominantly difficulty in falling asleep, staying asleep or waking too early. Often these are associated or caused by Hot Flushes. Lack of sleep can precipitate poor coping capacity, reduced concentration and cognition, anxiety, palpitations and rage. In this chaos, remedies like Lachesis help tremendously especially if associated with hot flushes. Kali phos helps with overactive ruminative thinking and Cocculus with a frenzied planning of things to do.

Anxiety & Irritability - Anxiety and Irritability can occur during menopause due to various physical, psychological and environmental changes. Depleting Estrogen levels are thought to deplete the body's coping mechanisms increasing the vulnerability of the woman. This can lead to feelings of being overwhelmed and anxious. Unattended, these can progress into severe forms like Panic attacks and Obsessions. Remedies that help this anxiety are Sepia , Pulsatilla, Staphysagria , Natrum Mur and many more. Each have specific differentiating criteria.

Eating Disorders – These spring from anxiety, sleep disorders, body shaming and various stress factors. Remedies like Anacardium, Lycopodium help stabilize eating patterns.



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Cognitive and memory decline – Declining estrogen slows the brain’s estrogen receptors bringing about decline in alertness, memory recall, focus and grasp. Absentmindedness is seen frequently here. Dementia is a debilitating disorder affecting memory and cognition and can impact quality of life very heavily. Few important remedies which help are Anacardium, Lycopodium, Baryta carb.

Corrective Lifestyle measures

A good lifestyle is essential for menopause transition. Healthy nutrition, timely meals, adequate sleep, Combination of aerobic exercises and strength training, Identification and management of stress factors, Sunlight and above all good communication with family and friends. Of high importance in today’s world is the complete loss of sleep hygiene. It is important to stress on the fact that gadgets of any kind disturb the secretion of melatonin and thereby dysregulate the normal sleep cycle.

Research

Multiple studies have been done on mental health and Menopause by Central Council for Research in Homoeopathy and International bodies.

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Conclusion

Mental health issues are widely prevalent during the menopause transition. Good communication and awareness helps identifying a problem and facilitates early intervention. Homoeopathy being holistic in approach, has the ability to ease the woman through her menopause transition.

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Article - 10

Lifestyle Changes in Midlife and Beyond



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India has a population of 1.38 billion people. Life expectancy of a Indian female is 70.3 years. So, a major part of a woman's life is spent post-menopausal. Non-communicable diseases account for 60% of total deaths in India. 100 million in India are over than 50 years. The earlier age of menopause in Indian women predisposes them to chronic health disorders a decade earlier than a Caucasian woman – Type 2 Diabetes Mellitus, cardiovascular disease and osteoporotic fractures. Hence, it is necessary to **promote healthy aging**.

Midlife is a critical window for cardiovascular prevention in women. Women who have a healthy lifestyle composed of abstinence from smoking, healthy diet and regular physical activity during the menopausal transition have lower levels of subclinical carotid atherosclerosis. Among the three, abstinence from smoking has the strongest association. Exercise lowers the risk of heart disease, Type 2 Diabetes Mellitus, hypertension and some cancers. It leads to compression of morbidity which means that you stay healthy longer in your late years, as



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compared with someone who spends the final 5 or 10 years battling chronic disease. It helps to prevent dementia and other cognitive changes. Midlife weight gain in women is related to aging and lifestyle. But, the years around menopause are associated with fat gain in the abdomen which predisposes them to cardiovascular disease.

The **ABCDEF of lifestyle management of midlife and beyond** includes – A – Avoid smoking, caffeine, alcohol, excess salt and sugar, B – Balanced diet, C – Calcium, D – Vitamin D, E – Exercise, and F – Fat – Food low in saturated fat and cholesterol.

Hippocrates said “Let Thy Food be Thy Medicine”. So, an appropriate **nutritious balanced diet** helps a great deal. A diet of 2200 K Cal daily, 100 grams fruits, 300 grams vegetables, mixed proteins, wholegrains, lentils, beans, phytoestrogens, 2 tsp of oil per day (combination of cooking oils – MUFA and Omega-3), adequate milk and curd, restriction of tea, coffee, sugar and salt is a healthy menopausal diet. Mediterranean diet helps. **Phytoestrogens** are plant substances that have similar effect to estrogen. Most important groups are Isoflavones present in soybeans, chickpeas, and red clover and Lignans present in flaxseed, whole cereals, cereal bran, sesame, broccoli and kale. Broccoli is beneficial for maintaining bone density. Lycopene protects women from osteoporosis and heart disease. Daily high intake of fruits and vegetables increase lycopene levels. Low carbohydrate and keto diets are effective for weight loss and improved mood, memory and concentration.

Regular physical exercise: It is important to sit less and move more. Regular physical activity increases endorphin production, improves mood and self-esteem and decreases hot flashes. Exercise on the other hand is a planned, structured, repetitive, purposeful movements to maintain fitness. Its benefits are huge –



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maintains healthy weight, increases metabolic rate, improves bone density, improves coordination, balance, muscle strength and joint mobility, improves lipid profile, reduces cardiovascular disease risk, improves genito-urinary problems, relieves depression and induces sleep. On the whole, it improves quality of life. The various types of exercise are:

A. **Aerobics** for cardiorespiratory fitness and body composition – running, jogging, jumping rope, gymnastics, sports like tennis, basketball, volleyball, and dancing (30 minutes or more on most / all days of week).

B. **Strength training** – lifting weights for several repetitions 3 times a week manages symptoms of menopause, slows down aging and improves body composition (2 to 3 times per week).

C. **Flexibility exercises** – non-weight-bearing, nonimpact activities. Yogasanas improve flexibility - Suryanamaskar, Vrikshasana, Trikonasana, Veerabhadrasana, Parsuvakonasana, Parivrittatrikonasana and Salabasana.

D. **Breathing exercises** – increases the oxygen carrying capacity and recharges mind and body.

E. **Balance exercises** – to maintain correct posture and balance.

F. Kegel's exercises to strengthen the pelvic floor.

G. **Tai Chi** reduces the risk of multiple falls by 47.5%.

It is important to **sustain exercising** by doing something new, by picking activities which can be easily worked into our day and finding a friend or group to exercise with.



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Sleep hygiene is important – going to bed and getting up at the same time each day, sleeping in a dark quiet room with no gadgets around and avoiding large meals, exercise, caffeine and nicotine 2 hours before sleep.

Spiritual, mental and emotional wellbeing should be addressed with prayer, meditation, pursuing a hobby, continuing to work and read, bonding with family and friends and participating in social activity.

Mind and body based therapy help too – cognitive behavior therapy, paced breathing and hypnosis. So, aging happens but good health is planned. A healthy lifestyle in midlife and beyond leads to healthy aging.

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Article - 11

Menopause and Bone Health



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Introduction

For the sake of simplicity, health of a person can be subdivided into 3 grades. ie diseased state, borderline health and prime health. When one has disease or suboptimal health allopathic pharmaceutical, interventions are spectacular in helping that person to reach a borderline health status. However, the common fallacy of us allopathic practitioners is to fall into the trap and think that more of the same therapeutic agent will make the person reach prime health. This is a flawed concept. A recent case in point is that of doctors ingesting kilos of Vit C in order boost their immunity during the covid epidemic. While vit C deficiency will certainly compromise immunity, overload of the same will not improve the immune system and infact can be quite deleterious.

What is changing dramatically in recent times is our understanding of wellness. Individual organ systems cannot be improved to an ideal state in isolation with the



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rest of the body lagging behind .All organ systems are intricately related and interdependent. Principles of health improvement done through lifestyle intervention is common to all organ systems. Thus a holistic approach is required for lifestyle disorders including perimenopausal osteoporosis.

Up until young adulthood, you form new bone faster than you lose old bone. By 25 years, you reach peak bone mass. Achieving a greater peak bone mass will increase the “bone bank” of calcium that your body may draw on throughout your life. This is why it's important for children to be active and to eat healthy foods to develop strong bones. The bone mass peaks by the age of 25 and starts to decline slowly by the age of 35. After menopause there is a further reduction in bone mass.

The pathophysiology of menopausal bone loss.

The findings from prospective examination of BMD change across the menopausal transition demonstrate an early and accelerated rate of bone loss, particularly in the lumbar spine. Bone loss begins to accelerate 1–2 years before menopause, concurrent with the prolonged amenorrhea that characterizes the late menopausal transition. Importantly, these rates of bone loss are also influenced by body size, with greater bone loss in non-obese women and those with lower body mass, independent of differences in race/ethnicity. The greatest reduction in BMD occurs in the year before the final menstrual period and the first two years after the final menstrual period, with lower rates of loss during the ensuing 1–7 years. An average annual rate of BMD decline of 2.5% in the lumbar spine and 1.7% in the femoral neck occurred in the time surrounding the final menstrual period. These findings are comparable to early data obtained in perimenopausal women where the average annual decline in vertebral BMD was in the range of 2.35%.



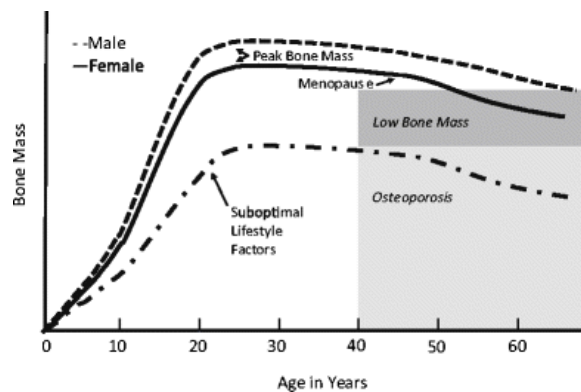
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Menopausal hormonal changes are also known to lead to bone loss and potentially also to loss of lean mass (sarcopenia along with osteopenia) The loss of muscle and bone tissue coincide due to the functional and developmental relationship and interaction between these tissues. There is significant association between BMD decline and either an increase in FSH or a decline in estradiol levels. Osteoporosis can lead to fragility fractures particularly of the hip, spine and wrist. It also causes a smooth kyphotic deformity of the thoracic spine which can be debilitating in some patient.



Monitoring Perimenopausal Bone loss

BMD testing uses a low dose X-ray of the hip and spine and is the standard for documenting bone strength or lack of it

BMD testing provides a T-score that compares your bone density to the average bone density of young healthy adults of same age and gender.

T-score	Interpretation
>-1.0	Normal Bone Density
Between -1.0 and -2.5	Low Bone Mass (Osteopenia)
-2.5 and below	Osteoporosis



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Clinical management considerations during the perimenopause include maintenance of adequate dietary calcium and vitamin D intake, attention to modifiable risk factors and consideration of osteoporosis screening in high risk populations with assessment of fracture risk.

Age, ethnicity and hereditary factors are nonmodifiable influences on the bone strength. The factors that can be modified are the following

The role of supplements is controversial . Pharmacological agents developed by allopathic sub specialists as universal supplements for everyone has been an abysmal disaster raising the question as to whether a universal supplement is a step in the right direction . Rampant use of drugs like statins for cardiac health , Iodine for thyroid and HRT for all post menopausal women has been a disaster . Similarly excess calcium intake has been proven to increase the incidence of heart disease and kidney stones. It is of paramount importance that calcium come from dietary sources and vit D from exposure to sunlight. There is nothing like a universal supplement and calcium and vit D must be prescribed only when there is a documented deficiency.

Diet and Lifestyle Factors

The dietary and lifestyle recommendations for optimal bone health and fracture prevention include a well-balanced diet, regular exercise, smoking cessation, avoidance of excessive alcohol consumption, and fall prevention measures. Attention should also be given to changes in weight, particularly in light of the known association of weight loss with increasing rates of bone loss and subsequent fracture risk.



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Maintenance of adequate calcium and vitamin D intake remain an important component of preventive bone health. Several studies have shown that calcium and vitamin D supplementation in those who are deficient improves BMD in those and reduces fracture risk in late postmenopausal women. The Women's Health Initiative (WHI) trial found that calcium (500 mg twice daily) and vitamin D (400 IU daily) supplementation in healthy postmenopausal women increased hip BMD only very modestly and calcium administration slows bone loss from sites comprised largely of cortical bone but has little effect on skeletal sites comprised largely of trabecular bone where fractures typically occur.

The positive effect of exercise on bone is dependent upon both the type of exercise and the intensity. Bones adapt its mass, architecture, and strength to changes in stress and strain induced by gravitational loading and muscle activity. During menopause and aging; the perfect link between amounts of bone resorbed and subsequently laid down is broken; with a net deficit occurring at the end of each remodeling cycle. It is characterized by pain, gradual loss of height, dowager's hump (severe kyphosis), and osteoporotic bone fractures. Bone strength is seen to be improved by weight bearing endurance exercises and muscle strength training. In addition, aerobics and resistance training help maintain or increase the bone mineral density (BMD) in postmenopausal women. Regular exercise helps to slow the rate of aging of the skeleton.

There is very prevalent misconception in India that resistance exercises with weights etc is only for body builders, and normal people must not do it. This myth has to be broken quickly for the wellbeing of our population. The modern understanding is that the skeletal system functions as a bone – muscle unit. Good muscle tone and strength is indicative of good health of bones in its vicinity.



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Currently as the futility of quick fix supplements for bone health or any lifestyle disorder is becoming more obvious, resistance (or muscle-strengthening) exercises become even more important. It is fair to say that resistance exercises are more important for women than men due to the menopause related effects . For women who do not have osteoporosis moderate to intense physical activity for at least half an hour at least 5 days a week is recommended. Muscle strengthening exercises improve the balance and posture which are important to prevent fall and improves the kyphosis. The resistance training; such as working out with free weights or circuit training is a particularly effective method of strengthening bone.

Aerobic activity like jumping skipping walking improves overall health and endurance

Yoga is recommended and is becoming increasingly popular to counter the negative effects of menopause on the female body. It then serves the purpose in several ways. Yoga can stimulate the bones to retain calcium, provided the body gets enough calcium in the first place. It does this through weight bearing poses of yogasanas that affect the spine, arms, shoulders, elbows, legs while encouraging a full range of motion. Weight bearing yoga training has shown a positive effect on the bone by reducing the bone resorption and hence preventing the risk of osteoporosis in postmenopausal women.

By pitting one group of muscles against another, yoga exposes bones to greater forces and, therefore, might enhance bone mineral density (BMD) more than other means. The advantages of such a program include universal applicability, virtual absence of side effects, and minimal cost. Yoga is one of the few exercise systems in which weight is borne through the arms and upper body, causing bones to



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become thicker and stronger. Recent research has proved that yoga can alleviate some of the height loss associated with osteoporosis.

Summary

It is important to adopt a holistic approach from a very young age in order to have healthy bones at a much older age. Monitoring the clinical parameters regularly will help in medical intervention if required. Exercising well and eating a healthy diet are crucial in preventing the sarcopenia and osteopenia associated with menopause and ageing. Yoga practices improve the physical, physiological and emotional changes associated with menopause and help in adapting the body to changing hormones.



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Article - 12

Cardiovascular Risk prediction and Prevention in Menopausal Women



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Introduction

Cardiovascular disease (CVD) is the leading cause of death in women, who have a notable increase in the risk for this disease after menopause and typically develop coronary heart disease several years later than men. This observation led to the hypothesis that the menopause transition (MT) contributes to the increase in coronary heart disease risk.

Menopause transition

Menopause signifies the permanent cessation of ovarian reproductive function. The transition from any level of function, manifested by uterine menstruation, to the absence of menses is referred to as the MT and is characterized as the time when the menstrual cycles become significantly variable or other menopause-related symptoms begin. The MT is a period of significant symptomatic,



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hormonal, menstrual, and other physiological changes that are relevant to CVD risk.

Factors Influencing Natural Menopause Timing

Age at natural menopause is viewed as a marker of not only reproductive aging but also somatic aging and general health. Later age at natural menopause has been linked to a longer life expectancy, higher bone mineral density and lower risk of fracture, and reduced all-cause mortality, CVD, and cardiovascular death, yet greater breast (among obese) and ovarian cancer risk. Other factors affecting MT are race and ethnicity, reproductive history, weight and body mass, premenopausal body mass index, physical activity, diet and alcohol consumption, cigarette smoking, and genetics.

Menopause characteristics relevant to CVD risk

Several MT characteristics have been evaluated in relation to CVD risk. These include age at menopause, type of menopause, menopause stages, endogenous estradiol, and menopause related symptoms.

Earlier age at natural menopause is generally reported as a marker of greater CVD risk and linked to being Black or Hispanic, having a short menstrual cycle length, having a low parity, being a smoker, and having a worse cardiovascular health profile during reproductive life. Of note, the studies on age of natural menopause and incident morbidity and mortality are not entirely consistent, which may be the result of different formulations of the composite outcomes. Iatrogenically induced menopause (ie, BSO) during the premenopausal period is associated with higher CVD risk.

Hysterectomy, regardless of ovarian status, does not influence CVD risk factors before or after menopause.

Vasomotor symptoms are associated with worse CVD risk factor levels and measures of subclinical atherosclerosis. These associations may depend on the



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timing of these symptoms during the MT. Vasomotor symptoms reported at midlife have been linked to an adverse lipid profile, insulin resistance, and greater risk for incident hypertension. A meta-analysis of 10 studies that included 213976 women with a total of 10037 CVD outcomes compared women with and without any menopausal symptoms reported that the presence of vasomotor symptoms and other menopausal symptoms was generally associated with increased risk of CHD, stroke, or CVD. Notably, only the association between menopausal symptoms and CHD persisted after adjustment for established CVD risk factors (RR, 1.28 [95% CI, 1.08–1.52]).

Sleep disturbance, a common complaint during the MT, is linked to a greater risk of subclinical CVD and worse cardiovascular health indexes in midlife women.

Depressive symptoms during the MT also have been strongly linked to increased CVD risk. In healthy women 46 to 59 years of age in the SWAN Heart Study followed up for 5 years, having ≥ 3 versus no episodes of depression was significantly associated with elevated coronary artery calcification scores.

Cardiometabolic health changes accompanying the MT beyond chronological aging

Key cohort studies, including SWAN, the Melbourne Women's Midlife Health Project, the Healthy Women Study, the Penn Ovarian Aging Study, and the Seattle Women's Health Study, were specifically designed to address relative contributions of chronological and reproductive aging to cardiometabolic health. The Atherosclerosis Risk in Communities cohort, the Nurses' Health Study II, and other prospective cohorts, although not designed for this primary purpose, have also offered important insights. In their efforts to disentangle the contribution of the MT beyond aging, longitudinal studies analysed health measures anchored to time elapsed since menopause and tested whether a linear or a piecewise model better fit the analysed data. The linear model was consistent with chronological



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aging, whereas the piecewise linear model suggested ovarian aging.

The SWAN study provided some of the strongest evidence on reproductive aging and changes in lipids, demonstrating that several lipid parameters (total cholesterol, LDL-C, and apolipoprotein B levels) increase dramatically within a relatively brief time span (from the year before to the year after the FMP) and that these associations were independent of the effect of aging alone.

Postmenopausal women who had normal BMI with higher central adiposity (defined as waist circumference ≥ 88 cm) were at higher risk of mortality than those with normal BMI and no central adiposity. Central/visceral fat increases and lean muscle mass decreases are more pronounced during the MT. The increased central adiposity is associated with an increased risk of mortality, even among those with normal BMI. Paracardial fat volumes are higher after menopause, independently of age, and could be influenced by estradiol levels or MHT use.

A systematic review found that the association between sedentary behaviour and all-cause mortality and CVD mortality was nonlinear. Specifically, the risk for all-cause and CVD mortality risk increased more rapidly with >8 h/d of sedentary behaviour.

Compared with women who never smoked, women who smoke have an increased risk of CHD and stroke incidence, as well as mortality from CHD and all causes. Hypertension remains the most prominent modifiable CVD risk factor that increases with age among women.

Diabetes is a stronger risk factor for CVD mortality in women than in men, and some evidence suggests a link between menopause and higher risk of type 2 diabetes.

Increases in lipids (LDL-C and apolipoprotein B), metabolic syndrome risk, and vascular remodeling at midlife are driven by the MT more than aging, whereas increases in blood pressure, insulin, and glucose are likely more influenced by



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chronological aging. Novel data show a reversal in the associations of HDL-C with CVD risk over the MT, suggesting that higher HDL-C levels may not consistently reflect good cardiovascular health in midlife women.

Effect of lifestyle interventions on cardio-metabolic health and CVD risk in midlife women: intervention timing

To achieve ideal cardiovascular health, lifestyle interventions should bring about smoking cessation in smokers, weight loss in overweight women, a DASH (Dietary Approaches to Stop Hypertension)- like eating pattern, physical activity to recommended levels, and optimization of total cholesterol, fasting blood glucose, and blood pressure levels. Strong lines of evidence support the critical contribution of controlling these factors in reducing CVD burden. However, very limited research has focused on the timing of lifestyle interventions as related to the MT, when women are subjected to multiple adverse changes in several cardiometabolic health parameters simultaneously.

Effects of menopausal hormone therapy use on cardiometabolic health and CVD events

All high quality evidence to date on the effects of MHT use on cardiometabolic health is based on clinical trials conducted among postmenopausal women. No data are available on the effects of MHT use on cardiometabolic health in women during perimenopause, who may need to use MHT to treat MT-related symptomatology. In fact, US Food and Drug Administration guidance on clinical trial design for new products to be approved for treating vasomotor symptoms recommends including only postmenopausal women, defined as those with 12 months of spontaneous amenorrhea or 6 months of spontaneous amenorrhea with serum follicle stimulating hormone levels >40 mIU/mL or women 6 weeks after BSO with or without hysterectomy.



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The literature supporting a critical role for the time of initiation of MHT use relative to menopause, with initiation at <60 years of age or within 10 years of menopause appearing to be associated with reduced CVD risk, strongly calls for further research assessing MHT use, including potential contrasts by form, route, and duration of administration, on cardiometabolic effects in women traversing menopause, a large proportion of whom experience menopausal symptoms before even reaching menopause.

Evidence suggests that the effects of MHT on the progression of atherosclerosis and CVD events vary by age or time since menopause when MHT is initiated. Specifically, beneficial effects on CVD outcomes and all-cause mortality may occur when MHT is initiated in women <60 years of age or <10 years since menopause, whereas null or harmful effects may occur when MHT is initiated at older ages or after greater time since menopause. Clinical trial comparisons of MHT formulations and routes of administration with CVD outcomes are not available

Lipid-lowering medications in Women

Although an optimal lipid profile is a measurable objective in the prescription of lipid-lowering therapies for women with elevated risk, data for primary and secondary prevention of atherosclerotic CVD and improved survival with lipid-lowering interventions remain elusive for women. Nonpharmacological therapies that incorporate lifestyle modification (exercise, weight loss, smoking cessation, and heart-healthy diet) are recommended as the first-line strategy for improving lipid profiles. The most recent lipid lowering guidelines recommend statins as first-line therapy for CVD risk reduction, regardless of sex or menopausal status.



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Conclusion

Cardiovascular diseases (CVD) are rising rapidly among the postmenopausal woman but they are less likely to identify their risk by an appropriate risk assessment tool. Menopause is a transition point for developing CVD not due to physiological changes only but psychosocial factors like depression, anxiety and marital stress are also responsible. So holistic approach needed to prevent CVD in women.

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Article - 13

Genitourinary Syndrome of Menopause



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Definition:

Genitourinary syndrome of menopause is a terminology which encompasses the symptoms and signs resulting from the effect of estrogen deficiency on the female genitourinary tract, including the vagina, labia, urethra, and bladder.(1)

This syndrome includes

- a. genital symptoms of dryness, burning, and irritation
- b. urinary symptoms and conditions of dysuria, urgency, and recurrent urinary tract infections (UTIs); and
- c. sexual symptoms of pain and dryness.

In essence the triad of Genital,Urinary and sexual symptoms arising due to estrogen deficiency on Female genitalia as a result of menopause is GENITO URINARY SYNDROME OF MENOPAUSE



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Vulvovaginal atrophy: (VVA)

A terminology which describes the appearance of the genital tissues but not the associated symptoms. It does not include urinary tract changes related to estrogen deficiency, and the term atrophy has negative associations for women (2)

Prevalence:

The percentage of postmenopausal women with VVA confirmed by examination is between 67 and 98%, whereas the prevalence of patients with symptoms of VVA has been reported to be about 50% (3).

In the Vaginal Health: Insights, Views and Attitudes survey, 45% of postmenopausal women reported experiencing vaginal symptoms, but only 4% were able to identify these symptoms as related to menopause or hormonal changes. Only 32% sought help from a gynecologist (4).

Reasons given for not speaking with a healthcare professional about their symptoms included embarrassment, belief that the symptoms were a normal part of aging and nothing could be done, and belief that the topic was inappropriate to discuss with their physician (5)

Pathogenetic mechanisms:

These symptoms are directly related to the reduced circulating estrogen levels after menopause. Estrogen receptors (ERs; both α and β) are present in the vagina, vulva, musculature of the pelvic floor, endopelvic fascia, urethra, and bladder trigone during reproductive life; their levels decline with menopause and may be restored by estrogen treatment (6)

As a result of estrogen deficiency after menopause, anatomic and histologic changes occur in female genital tissues. These include



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- a. reduction in the content of collagen and hyaluronic acid and in the levels of elastin,
- b. thinning of the epithelium, alterations in the function of smooth muscle cells,
- c. Increase in the density of connective tissue, and fewer blood vessels.
- d. These changes reduce elasticity of the vagina, increase vaginal pH, lead to changes in vaginal flora, diminish lubrication, and increase vulnerability to physical irritation and trauma (6,7)

The female genital tract and lower urinary tract share a common embryonic origin, both arising from the urogenital sinus. (8) As estrogen plays an important role in the function of the lower urinary tract throughout the premenopausal period, estrogen deficiency after menopause causes lower urinary tract symptoms, such as dysuria, urgency, frequency, nocturia, urinary incontinence (UI), and recurrent UTI.(8)

Since ERs are present in the trigone of the bladder and in the squamous epithelium of both the proximal and distal urethra, estrogen may increase the sensory threshold of the bladder and urethral closure pressure.(8)

The major cause of Urinary incontinence (UI) in postmenopausal women was the intrinsic sphincteric dysfunction related to altered connective tissue following estrogen deficiency, while the anatomical change was the most responsible factor of UI in premenopausal women.(9)

The vaginal microbiota plays an important role in preventing colonization by pathogenic organisms, including sexually transmitted and urinary tract infectious agents, and broadly acts to maintain a women's gynecologic and reproductive health (10). An environment rich in Lactobacillus species is associated with



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Who are at risk??

- Menopause
- Bilateral oophorectomy
- Premature ovarian failure
- Smoking
- Alcohol abuse
- Decreased sexual frequency or abstinence
- Lack of a vaginal birth
- Other causes of low oestrogen (eg postpartum period, hypothalamic amenorrhoea)
- Cancer treatments, including pelvic irradiation, chemotherapy and endocrine therapy have all been implicated as risk factors

vaginal health (11), while the loss of Lactobacillus is associated with VVA, vaginal dryness, and gynecologic infections (11). Women with GSM are more often found to have a bacterial flora that is relatively lower in Lactobacillus (10)

Postmenopausal and premenopausal women may have different risk factors for UTI. While sexual intercourse is the most common cause among younger women, UI, anatomic changes such as a cystocele, increased residual urine and diabetes are the risk factors for recurrent UTI in older women (12)

Levine et al reported that postmenopausal sexually active women with sexual dysfunction were nearly four times more likely to have vulvovaginal symptoms than those without sexual dysfunction. Among women with vulvovaginal symptoms, 40% also reported overall sexual dysfunction, 24% lack of desire, 34% arousal difficulties, and 19% orgasm difficulties(13)

The Study of Women's Health Across the Nation (SWAN) in the USA reported that women with sexual dysfunction considered vaginal dryness to be an important



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factor associated with masturbation, pain, arousal, physical pleasure, and emotional satisfaction (14)

Clinical assessment:

While assessing a woman presenting with any genital irritation, urinary or sexual symptoms a thorough clinical assessment with careful inspection and gentle palpation and a sensitive execution of an intimate examination is mandatory.

A careful history taking in a sensitive and culturally appropriate manner should be taken pertaining to all symptoms assessing severity and impact on quality of life

1. Her medical, surgical, menstrual, gynaecological and obstetric histories may be relevant to development of particular symptoms and subsequent management.
2. Ask about vulval hygiene and the use of possible irritants such as soap, bath gels, powders, lubricants, condoms, panty liners or pads that could cause symptoms.
3. Identify and document the onset of symptoms, their description, duration, how bothersome or distressing the symptoms are, and their impact on quality of life.
4. The patient's psychosocial and sexual history should include the presence of a long-term or new partner, partner relationship, frequency of sexual activity, history of sexually transmissible infections (STIs) and the effect of her symptoms on her sexual intimacy

Anatomical and functional changes in the genitourinary tissues on clinical assessment:

- Loss of labial and vulval fullness



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- Contraction of labia majora and clitoral hood
- Narrowing and stenosis of the introitus
- Loss of hymenal remnants or reduced elasticity
- Vaginal shortening and narrowing
- Prolapse
- Pelvic floor weakening
- Vaginal epithelium dry and thin with petechiae
- Loss of superficial cells and increase in parabasal cells
- Loss of vaginal rugae
- Inflamed vaginal tissues
- Alkaline pH changes the vaginal microbiome with loss of Lactobacilli (vaginal pH >4.5)
- Persistent or recurrent discharge with odour (not Candida in postmenopause)
- Urethral meatal prominence and prolapse with thinning of the urethral epithelium
- Touch perception altered either hypersensitive or decreased feeling
- Loss of clitoral stimulation

Consider and rule out the following

Dermatological conditions of the vulva (eg lichen sclerosus or planus, eczema, dermatitis, chronic vulvovaginitis)

- Vulvodynia, vaginismus
- Autoimmune disorders
- Malignancy
- Chronic pelvic pain



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- Trauma, foreign bodies
- Diabetes
- Lupus

Management

Aim of clinical management is to

1. Offer symptomatic relief
2. Improve quality of life
3. Rule out STIs, Malignancy, UTI
4. Offer Lifestyle management advice
5. Advice regards smoking cessation and limit alcohol consumption
6. Offer advice regards appropriate personal and intimate hygiene

Treatment Modalities:

These may be Non Hormonal or hormonal therapies

Non-hormonal therapies include personal lubricants, vaginal moisturisers and vaginal laser (long-term safety and efficacy have not been established)

Hormonal therapies include vaginal oestriol cream or pessaries, vaginal oestradiol tablets, or systemic hormone therapy (menopause hormone therapy [MHT])

Lubricants and Moisturisers:

- Lubricants offer comfort for sexual activity and vaginal moisturisers are for long term benefit



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- Preferable to use Low osmolality <1200 and water based lubricants as they cause lesser incidence of contact dermatitis and irritation.
- Hormonal therapies
- Local estrogen therapy
- Systemic estrogen therapy

Mechanism of action:

Oestrogen vaginal preparations reduce symptoms and reverse the atrophic changes in pelvic tissues, and improve blood flow and the thickness of the epithelium in the vagina, bladder and urethra.

Estriol cream is preferred daily once for two weeks and then weekly thrice for 6 months.

Treatment of sexual dysfunction:

It's a multidisciplinary approach

Psychosexual counselling

Lubricants and Moisturisers

Vaginal estrogen therapy or vaginal estradiol tablets 10 mcg

Vaginal dilators

SERM Agents :

Ospemifene (60-mg dose) reduces the severity of dyspareunia and has beneficial effects for vaginal dryness and bone as well as anti-estrogenic effects on breast tissue.

The most common side effect is hot flushes. Other adverse events include: vaginal discharge, muscle spasm, genital discharge, and hyperhidrosis 15]. Compared with



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placebo, ospemifene decreases vaginal pH, reduces parabasal cells, and increases superficial cells [16]. A meta-analysis of the ospemifene randomized trials suggested that it is well tolerated with a good safety profile.

Prasterone (Intrarosa®)

Is a synthetic equivalent to endogenous DHEA approved for the treatment of moderate-to-severe dyspareunia [17]. Pre-clinical studies of prasterone have found improvements on the collagen and muscularis layers of vaginal tissues, as well as increased nerve density in the vagina [Prasterone is administered as a vaginal insert once daily at bedtime

Laser Therapy

The use of the erbium:YAG laser has been shown to improve symptoms of GSM and stress urinary incontinence [84]. These studies lack randomization, and evidence is limited to recommend routine usage

Summary & Recommendations

- Education about and screening for GSM is recommended for perimenopausal and postmenopausal women.
- First-line therapies for women with GSM include nohormone lubricants with sexual activity and regular use of long-acting vaginal moisturizers.
- For women with moderate to severe GSM and those who do not respond to lubricants and moisturizers, several safe and effective options are available:
 - Low-dose vaginal ET
 - Vaginal DHEA
 - Ospemifene



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- Systemic ET (when VMS are also present)
- For women with a history of breast or endometrial cancer, management depends on a woman's preferences, symptom severity, and understanding of potential risks after consultation with her oncologist
- Energy-based therapies, including vaginal laser and radio frequency devices, require long-term, sham-controlled safety and efficacy studies before their routine use can be recommended.
- Therapy for GSM should be continued, with appropriate clinical follow up, for as long as bothersome symptoms are present.

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