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Ayurvedic and modern literary overview of menopause

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ABSTRACT

Menopause is the natural process and one of the important milestone in women's life. According to modern science it is defined as cessation of ovarian function resulting in permanent amenorrhea lasting for at least one year. It causes many changes the body and mind due to hormonal changes. There is nearly 50% reduction in the androgen production and 90% reduction in oestrogen production at the time of menopause. Due to this various physical, mental changes occur in women. Degenerative changes starts in reproductive organs. Various early and late symptoms are seen.

“वृद्धा तत्परतो ज्ञेया सुरतोत्सवर्जिता” - भा. प्र. (यो. र. रात्रीचर्या ६-१०)

Ayurvedic life style is based on principals of naturopathic life style with a lot of discipline and control with medicine .According to Ayurveda menopause is called as “Rajonivrutti “. Rajonivruttijanya laxana is group of symptoms produced by degenerative changes in body. Degenerative changes are explained in ayurveda as dhatukshaya, vata dosha dominance is seen in this stage of life.1

Keywords: Menopause, Rajonivrutti

INTRODUCTION

Menopause is defined as cessation of menses for period of 12 months or period equivalent to 3 previous cycles or time of cessation of ovarian function resulting in permanent amenorrhea. Various hormonal changes take place in body during this phase of life, which results in development of several signs and symptoms that may disturb routine activity.

Menopause is linked with vatadosha dominated stag of life. Degenerative changes are explained in ayurveda as dhatukshaya. According to ayurveda female at the age of menopause is called nishphala ,vigatartavar. It depends on species and inheritance.

In Ayurveda menopause is called as “rajonivrutti”and female at this stage is called as nishphala, vigatartava. In Ayurveda womens life is divided in three stages that are bala ,rajasvala,vrudha.I.e.bala avstha is kaphapradhan, rajasvala avstha is pitta pradhan, Vrudha avstha is Vatapradhan. 2

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Vaya vibhajana according to ayurveda –

According to sushrut samhita

Sushruta has explained ages in three kinds balya, madhyama ,vrudha.

Balya avastha starts from birth up to 16 years

Madhyam avstha is from 16 years to 70 years.

Madhyam avastha is again divided in –vrudhi,

Yauvana

sampurnata

parihani

Pariharini is stage in which slight decrease in function of all tissues is seen it starts at the age of 40 years and ends at 70 years .

Vrudhavstha is explained at age above seventy years ,in this stage of life women develops wrinkles of the skin, grey hairs ,in ability to perform all activities .4

According to charak samhita

Balya 1)aparipakwa dhatu
2) Vivardhaman dhatu

Madhyam (from 30 – 60 years),

Vrudha (from 60 – 100 years). 5

According to kashyapa

According to kashyapa madhyam avastha is from 34 years to 70 years and vrudhavastha is explained from 70 years to death . After 34 years of age stability of *dhatu*s occurs up to 70 years of age ,afterwards with gradual decrease of dhatu .6

Vata increases in old age,treatment should be done according to vata dosha pradhanta. 7

तद् वर्षात् द्वादशात् काले वर्तमानमसृक् पुनः शरीराणां याति पञ्चाशत्: क्षयम् ॥
सु.शा. 3/11

According to sushruta menses starts at the age of 12 years and menopause at the age of 50 years. According to sushruta 50 year is mentioned as age of rajonivrutti .

Signs and Symptoms according to ayurved samhita -

In Ayurveda menopause is linked with ageing & it is vata predominant stage of life. Symptoms of menopause experienced by Women are similar to the symptoms seen in vata dosha rises & upset the normal balance of body. Vata mixed with pitta , gives rise to burning sensation, exhaustion by heat (increased body temperature) and fainting getting covered with kapha it produces coldness ,swelling and feeling heaviness . Apana when covered by pitta produces burning sensation, more heat and menorrhagia in women.8

Changes during menopause according to ayurveda -

changes in reproductive organ.-Dimb granthi-shushkata , decreases in size, Garbhashaya –garbhashay greva shosh , Apushta, Tantuyuktata, decreased size of Amtahkala. Yoni- shosh, sankuchit, Bhaga –shushkta, body changes asthisushirta,asthishul,gaurav,ojo kshaya ,mutrashaya shoth, 9

Post menopausal symptoms according to Ayurveda – jarajirnata janya yoni shoth,mutrashaya shoth,asthisushirta,tvak varnhinata,mansik kshubdhata.10

Dhatukshaya:

At vrudhavastha 7 dhatus undergoes degenerative changes which causes various effects on female body.

- 1.Rasakshay - Various symptoms can be seen like *Trishna, shabda Asahatva, Shool, Shosha*
2. Raktakshay - In vrudha avasta pradhany also gets suppressed which results Twakrushta , sirashaithilya formation in Rajonivrutti
- 3.Manskshaya - Sphikgandadi shushkata, Glani, Dhammanishaithily . Loss of tone & elasticity of skin can be seen
- 4 Medakshay–Anga rukshata , shrama ,Shosha, krushata is seen .
- 5.Asthikshaya -Sandhi shaitilya occurs in *Asthidhatukshay*. [Arthritis & Osteoporosis occurs in this condition].Dryness of bones, fractures and pain.
- 6.Majjakshaya - Asthishsaushirya, Asthitoda, Dourbalya, Bhrama, Tama darshan, sandhi shunyatva(Mood swing & depression occurs sometimes)
- 7.Shukrashay-Panduta As per Samanyavishesh sidhant,Dhatukshay is responsible for vatavidhi .Vayu is responsible for initiation & progress of activity. Vitiated vata dosh affects various organs. For example due to vitiated Apanvayu symptoms like vaginal prolapse, Urinary incontinence, dry vagina occurs. Due to pranvayu and udanvayu psychological symptoms like sleep disturbance mood swings, depression.11

Ojas kshaya -

ओजः संक्षीयते ह्येभ्यो धातुग्रहणनिः सृत्म् ॥

तेजः समीरितं तस्माद्विस्त्रंसयति देहिनः ॥23 ॥

सु.सू. 15 / 23

Ojas decreases due to dhatus associated with tejas and vata and it troubles the body .

Due to dhatukshaya at age of rajonivrutti oja kshaya laxana are seen .Ojas is the substance present in every dhatu and considered as its essence and responsible for strength of the body.12

Chikitsa

Vata increases during old age so treatment during this age should be taken for vata shaman

1. Considering above signs and symptoms there is certain management advised in Ayurved samhitas to reduce severity of these symptoms of menopause, as all lakshanas are due to vata dominance vata shaman is the principle line of treatment.
2. Snehan ,swedan ,shodhana
- 3.

सर्वगं कुपितोऽभ्यङ्गो बस्तयः सानुवासनाः॥
स्वेदाभ्यङ्गावगाहाश्च हृदयं चात्रं त्वगाश्रिते॥
च.चि. 28/91

In whole body vata vrudhi sarvang, snehana, swedan ,anuvasana basti and niruha basti is usefull for vatashaman

बस्तीकर्म त्वधो नाभेः शस्यते चावपिडकाः॥
च.चि.28/91

Vata prakop below umbilical region can be treated by basti karma and avpid nasya

4. Sthanik upkram-shiro pichu, shiro vasti, abhyanga sneha, yonipichu
5. Abhyang- with bala tail, sesame oil
6. Meditation shirobasti- in manas laxana
7. Diet – 1) Ahariy – changes according to agnibal ,vata shamak ahar ,balya, jeevaniya, rasayana, rasadi-dhatu-vardhak,
2) Varjya- sheet ahar, vata vardhak ahar , 13
6. Activities – Exercise, Yoga, Meditation

Menopause according to modern aspect:

Definition - Permanent Cessation of menstruation at the end of reproductive life of ovarian function. The women said menopausal when she has not had any menstrual bleeding for at least 12 months. This stage involves physical, sexual and psychological changes in women .

Current status –Now a days menopause age is above 50 years this delayed menopause may be due to good nutrition, better health and Socioeconomic status. Early menopause is seen in women having lower BMI, several studies shows women having higher BMI are having higher levels of estradiol (E1) and estrone (E2). in their body. Also in nulliparus women early menopause is seen. 14

Clinical diagnosis –Stoppage of menstruation (amenorrhoea) for 12 consecutive months without any other pathology.

Age of Menopause- Ageing is real challenge for women .All women who live beyond the age of 45-50 year experience a period of transition from reproductive to non reproductive. The period after menopause is called post menopause, the first 4 years after menopause are called early post menopause and later years are called late menopause. Late menopause is also common in women suffering from uterine fibroids & those at high risk of endometrial cancer. Most reliable predictor of age of menopause may be the age of menopause in her sister & mother. 15

Menopausal Symptoms

Hot flushes
Insomnia
Mood changes Vaginal dryness / Genital symptoms.
Atrophic vaginitis
Urinary symptoms-
Drying out of thinning out of skin Palpitations
Loss of libido
Osteoporosis
Anxiety / Depression.

Hot flushes-Hot flushes of sweating commonly occur as result of vasomotor disturbance and may be present nearly 85% of women .This may be preceded by headache. Hot flushes can be defined as acute sensation of heat and skin changes.

Mental symptoms- Mental depression may occur due to disturbed sleep & inability to cope up with the body changes .There may also be inability of loss of concentration. - Pseudocyesis (fear of pregnancy) and cancer phobia may develop in some women.

Vaginal Dryness-Signs & symptoms of vaginal dryness include dryness, Itching, burning pain or light bleeding with sexual intercourse, & recurrent vaginal infection .

Urinary symptoms - These may include symptoms such as dysuria, urge incontinence, increased frequency or urgency.

Genital symptoms Genital symptoms such as dryness of vagina, dyspareunia, and genital prolapsed of urinary or faecal incontinence may also occur.

Skin changes These may be in the form of redness of skin over neck, chest, head accompanied by an increase in heart rate and an intense body heat. It is mediated by noradrenalin and serotonin. There is increase in core body temperature & vasodilatation during hot body flushes

Loss of Libido - Although many women experience reduced libido. Some women may also experience an increase in libido due to riddance of menstruation and fear of pregnancy.

Osteoporosis - Osteoporosis is characterised by low bone mass and loss bone density resulting in weak and fragile bones. It is associated with an increased risk of fractures of bones. The risk of fracture due to osteoporosis depends on the bone mass at the time of menopause and rate of bone loss following menopause. Menopause results in falling estrogen levels, which may result in development primary osteoporosis. As the regular effect of oestrogen on bone reabsorption is lost, it is accelerated and not adequately balanced by compensatory bone formation during menopause, there is likely to be deterioration of bones of vertebral column resulting in a stooped posture or kyphosis.¹⁶

PATHOPHYSIOLOGY

Initially ovulation fails no corpus luteum forms and no progesterone is secreted by ovary. Menopause sets in when the follicular number falls below 1000. Therefore premenopausal menstrual cycles unovulatory and irregular.

Later Graafian follicles also fail to develop oestrogenic activity which leads to reduced & endometrial atrophy leads to amenorrhoea. The cessation of ovarian activity & a fall in oestrogen and inhibin levels cause a rebound increase in secretion of FSH & LH by anterior pituitary gland. The FSH level may rise as much as 50 fold and LH 3-4 fold.

Extra glandular conversion of androstenedione to estrone occurs in fatty tissue. Post menopausally, adrenal cortex becomes pre dominating oestrogen after menopause.

Post menopausal daily oestrogen formation has been estimated as 15 to 100 ug/day serum level at 30 to 70 pg /ml. Total urinary oestrogen level falls to about 6ug /24 hour at post menopausal period. Testosterone level does not fall because premenopausal ovary secretes more testosterone.

Gonadal failure at menopause. Plasma oestradiol level falls oestrone remains normal.

Menopausal urine has become an important. Commercial Oestradiol production drops down to the optimal level of 20pg/ml → No endometrial growth absence of menstruation.

Oestrogens-Predominant oestrogen is estrone and to a lesser extent oestradiol. Serum level of estrone (30-70pg/ml) is higher than that of oestradiol (10-20 pg/ml).

The major source of estrone is peripheral conversion (aromatization) of androgens from adrenals and ovaries. The aromatization occurs at the level of muscle and adipose tissue.

The trace amount of oestradiol is derived from peripheral conversion of androgens from adrenals and ovaries. There is sharp fall in oestrogen and also tropic hormones about 5-10 years after menopause.

Androgens-Stromal cells of the Ovary continue to produce androgens because of increase in LH after menopause in androgens is androstenedione & testosterone. The secretion of androgens from post menopausal ovary are more, their peripheral levels are reduced due to conversion of androgens to estrone in adipose tissue. The cumulative effect is decrease in oestrogen: androgen ratio. This results in facial hair growth and change in voice

As the obese patient converts more androgens into oestrogen, they are less likely to develop symptoms of oestrogen deficiency osteoporosis but are vulnerable to endometrial hyperplasia and endometrial carcinoma.

Progesterone-trace amount of progesterone detected is probably adrenal in origin.

Gonadotrophins - GnRH pulse secretion is increased both in frequency and amplitude during menopause there is fall in level of prolactin and inhibin. Hence fall in level of inhibin leads to increase in level of FSH from the pituitary due to physiologic aging GnRH and both FSH and LH level decreases with decrease in oestrogen level. 17

Hormone Levels

Hormone Levels in Menopausal Woman.

E2 -5-25 pgl/ml

Oestrone -20-20 pg/ml more in obese women

FSH- > 40 mIU/ml

Androgen -0.3 -1.0 ng/ml

Testosterone -0.1-0.5 ng/ml

LH -50-100 mIU/ml

Androstenedione -800pg /ml
Growth hormone inhibin B – low
Anti Mullerian hormone -low.18

Anatomical changes

Ovaries- Shrink in size, become wrinkled and white .Thinning of cortex with increase in medullary component.

Fallopian Tube.- The muscle coat become thinner cilia disappear & plicae become less prominent

Uterus-Become smaller, Ratio Body: Cervix=1:1

Cervix –Cervical secretion becomes scanty with high androgenous oestrogen, endometrium may be proliferative or even partiovaginalis atrophies and gets flushed with vaginal vault.

Vagina - Become narrow due to gradual loss of elasticity Daderling bacillus is absent .Vaginal pH becomes alkaline. Vaginal epithelium becomes thin

Vulva- Labia became flattened & pubic hair becomes scantier. Narrow introits.

Breast fat -is reabsorbed & glands atrophy. The nipples decrease in size, breast becomes flat & pendulous.

Bladder and urethra -epithelium become more prone to damage and infection .There may be dysuria, frequency ,urge or even stress incontinence.

Loss of muscle tone – This causes uterine descent of Anatomic changes in urethra & neck of bladder ligament supporting to uterus vagina lose their tone .19

Other Factors responsible for menopause

Early menopause due to radiation

Surgical menopause

Chemotherapy especially alkylating agents

Smoking,

Addiction of caffeine, alcohol.

Family history of menopausal diseases

Drugs such as GnRH. Heparin, corticosteroids & clomiphene when given over prolonged period more than 6 months can lead to oestrogen deficiency.

Diabetes

Essential investigation-

Haemoglobin

Hormone profile

Lipid profile

Alkaline phosphatase

TSH ,calcium level,

ESR

URINE routine and microscopic

Biochemical examination – BSL fasting,

USG of pelvis

Total serum proteins.20

Advised manegment for healthy or safe menopause –

In menopause women should advise healthy life style changes like healthy diet,daily which include protein ,vitamins ,minerals.Daily intake of calcium is necessary to reduce bone loss during menopause .

Balanced diet which contains fruits ,vegetables ,milk and milk products. Phytoestrogen containing food is useful , soyabean is good source of phytoestrogen .soybean proteins also have property to inhibit growth of breast cancer cells. 21

Regular physical exercise and yoga meditation is preferred to maintain physical and mental health .

Late effects of menopause

Menopausal women with chronic oestrogen deficiency are liable to develop the following fracture backache ,Osteoporosis &

Cardiovascular accidents such as ischaemic heart disease

myocardial infarction ,Atherosclerosis, Hypertension Hypothyroidism and diabetes.

Stroke

Skin changes

Alzheimer disease
Ano-colanic cancer
Tooth decay
Prolapse of genital tract , stress incontinence of urine & faecal incontinence
cataract, Glaucoma of macular degeneration. 22

CONCLUSION

Menopause is physiological changes in every womens life . These physiological changes comes with many symptoms termed as menopausal syndrome . According to Ayurveda in rajonivrutti disturbance in agni, dhatukshaya, dhatugat vata these symptoms are seen .

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