IJNRD.ORG ISSN : 2456-4184
INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

MENOPAUSE – A LITERATURE REVIEW

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ABSTRACT :

Menopause, the permanent cessation of menses, reflects oocyte depletion and loss of gonadal steroids. It is preceded by a transition state, the perimenopause, which is characterized by the gradual loss of oocytes, altered responsiveness to gonadal steroid feedback, wide hormonal fluctuations, and irregular menstrual patterns. The goal of this mini-review is to discuss the basic pathophysiology of the menopausal transition and the hormonal and nonhormonal management of clinicopathology attributed to it.

KEYWORDS :

osteoporosis, peri, estrogen and hormone

INTRODUCTION

Menopause is the permanent cessation of menses for 12 months resulting from oestrogen deficiency and is not associated with a pathology. The median age of menopause is 51. Most women experience vasomotor symptoms, but menopause affects many other areas of the body, such as urogenital, psychogenic, and cardiovascular. This article will review hormonal and non-hormonal treatments, as well as complications of menopause. Patients are living longer, and women are spending up to one-third of their lives in post-menopause.

INCIDENCE

In the United States, approximately 1.3 million women become menopausal each year. It typically begins between the ages of 51 and 52. However, about 5% of women experience early menopause between the ages of 40 and 45. Additionally, 1% of women experience premature menopause before the age of 40 due to permanent ovarian failure that may be associated with sex chromosome abnormalities

ETIOLOGY

As women grow older, their ovarian follicles diminish in number. There is a decline in granulosa cells of the ovary, which were the main producers of oestradiol and inhibin. With the lack of inhibition from oestrogen and inhibin on gonadotropins, follicle-stimulating hormone (FSH) and luteinizing hormone (LH) production increases. FSH levels are usually higher than LH levels because LH is cleared from the blood faster. The decline in oestrogen levels disrupts the hypothalamic-pituitary-ovarian axis. As a result, a failure of endometrial development occurs, causing irregular menstrual cycles until they stop altogether.

Menopause may occur due to surgical procedures such as a hysterectomy with bilateral oophorectomy. Menopause can be caused by treatment for certain conditions, like endometriosis and breast cancer with antioestrogens and other cancers due to chemotherapy medications.

PATHOPHYSIOLOGY

Menopause is a normal physiologic process in aging women in which the number of ovarian primary follicles quickly diminishes, such that there are inadequate amounts to respond to the effects of FSH. In turn, there is no LH surge, and ovulation does not take place, resulting in the decline of oestrogen production and the cessation of menstruation. Moreover, LH and FSH go uninhibited and remain at high levels years after the onset of menopause. Small amounts of oestrogen may still be produced via conversion from testosterone released by the adrenal glands, such that symptoms other than the discontinuation of periods may be negligible in some individuals.

DIAGNOSTIC EVALUATION

Physical Examination

They Should include measurement of blood pressure, weight, and height, breast palpation, vaginal examination, and Pap smear.

- **Blood Pressure:** Elevated blood pressure may be noted resulting from arterial vasoconstriction.
- **Weight and Height**: Weight gain may be noted, as many women report some degree of weight gain during menopause. The North American Menopause Society stated women gained an average of 5 pounds (2 kg) over the menopause transitional period. Additionally, a decrease in height may be noted, associated with osteoporosis and spine fractures.
- **Breast and vagina**: Breast palpation usually notes decreased breast size. The vaginal examination notes dryness and urogenital atrophy. Abnormal uterine bleeding is an indication to perform a pap smear.
- **Anatomic defects:** Other causes of amenorrhea can be from anatomic defects, such as Asherman's syndrome, the scarring of the uterine cavity after a dilation and curettage (D and C) procedure. Obstruction of the uterine outflow tract is another anatomic defect. In addition, infections and scarring (i.e., tuberculosis) can cause anatomic defects.
- **Hypothalamic-pituitary-gonadal axis:** Amenorrhea can also result from a dysfunction in the hypothalamic-pituitary-gonadal axis. For this reason, hypothalamic dysfunction should be examined. Obesity, malignancy, and anorexia nervosa should be considered as they can cause hypothalamic deficiency. Pituitary dysfunctions, such as hyperprolactinemia, Sheehan syndrome (necrosis of the anterior pituitary), and pituitary adenoma should be worked up. Ovarian dysfunctions like ovarian tumours, polycystic ovarian disease, and premature ovarian failure.
- **Endocrine gland disorders:** Amenorrhea can also result from other endocrine gland disorders, such as thyroid dysfunction, which is the most common endocrine gland disorder. Also, consider adrenal gland disorders such as congenital adrenal hyperplasia and Cushing disease/syndrome.

SIGNS AND SYMPTOMS

Vasomotor Symptoms

Approximately 75% of women experience vasomotor symptoms. These symptoms include hot flashes, night sweats, palpitations, and migraines. Hot flashes often last approximately three to four minutes at unpredictable intervals. They may be worsened by alcohol, eating, emotional stress, and exertion. Migraines may change in intensity and severity. Migraines without aura are more common than migraines with aura. Migraines with aura have an increased risk of stroke, especially if women smoke or use oral contraceptives. Other types of headaches, such as cluster and tension headaches, may also increase with a change in hormone levels.

Urogenital Symptoms

Approximately 60% of women experience urogenital symptoms. These symptoms include vaginal atrophy, urethral atrophy, and sexual dysfunction (i.e., a decline in libido). Vaginal atrophy results in dryness, pruritus, and dyspareunia (painful intercourse). Urethral atrophy results in stress incontinence, frequency, urgency, and dysuria.

Psychogenic Symptoms

Approximately 45% of women experience psychogenic symptoms. These symptoms include anger/irritability, anxiety/tension, depression, sleep disturbance, loss of concentration, and loss of self-esteem/confidence.

TREATMENT

Menopause requires no medical treatment. Instead, treatments focus on relieving your signs and symptoms and preventing or managing chronic conditions that may occur with aging. Treatments may include:

- **Hormone therapy.** Oestrogen therapy is the most effective treatment option for relieving menopausal hot flashes. Depending on your personal and family medical history, your doctor may recommend oestrogen in the lowest dose and the shortest time frame needed to provide symptom relief for you. If you still have your uterus, you'll need progestin in addition to oestrogen. Oestrogen also helps prevent bone loss. Long-term use of hormone therapy may have some cardiovascular and breast cancer risks, but starting hormones around the time of menopause has shown benefits for some women. Talk to your doctor about the benefits and risks of hormone therapy and whether it's a safe choice for you.
- **Vaginal oestrogen.** To relieve vaginal dryness, oestrogen can be administered directly to the vagina using a vaginal cream, tablet or ring. This treatment releases just a small amount of oestrogen, which is absorbed by the vaginal tissues. It can help relieve vaginal dryness, discomfort with intercourse and some urinary symptoms.
- **Low-dose antidepressants.** Certain antidepressants related to the class of drugs called selective serotonin reuptake inhibitors (SSRIs) may decrease menopausal hot flashes. A low-dose antidepressant for management of hot flashes may be useful for women who can't take oestrogen for health reasons or for women who need an antidepressant for a mood disorder.
- **Gabapentin (Gralise, Horizant, Neurontin).** Gabapentin is approved to treat seizures, but it has also been shown to help reduce hot flashes. This drug is useful in women who can't use oestrogen therapy and in those who also have nighttime hot flashes.
- **Clonidine** Clonidine, a pill or patch typically used to treat high blood pressure, might provide some relief from hot flashes.
- **Fezolinetant** This medicine is a hormone-free option for treating menopause hot flashes. It works by blocking a pathway in the brain that helps regulate body temperature.

- **Medications to prevent or treat osteoporosis.** Depending on individual needs, doctors may recommend medication to prevent or treat osteoporosis. Several medications are available that help reduce bone loss and risk of fractures. Your doctor might prescribe vitamin D supplements to help strengthen bones.

COMPLICATIONS

- Heart and blood vessel (cardiovascular) disease. When your oestrogen levels decline, your risk of cardiovascular disease increases.
- Osteoporosis. This condition causes bones to become brittle and weak, leading to an increased risk of fractures.
- Urinary incontinence. As the tissues of your vagina and urethra lose elasticity, you may experience frequent, sudden, strong urges to urinate, followed by an involuntary loss of urine.

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