



Hormone Replacement Therapy: The Plight of Aging Women in Arab Nations

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Abstract

The challenges for the aging woman in the Arab world are complex and encompassed by many facets. Some of the health issues are focused on the aging process, which take into account a cultural and religious perspective to effectively and successfully improve the health of the aging woman. One of the largest dilemmas faced by the aging Arab woman is the end of childbearing years and the beginning of menopause. The changes and challenges that accompany menopause are often addressed by considering hormone replacement therapy for the diminishing hormone levels present during childbearing years. The status of hormone replacement use, the pros and cons, and other considerations that are complementary and alternatives to addressing the aging processes, especially in the Arab world, are discussed in this chapter.

Key words: Hormone Replacement, Menopause, Perimenopause, Hormone Therapy, Estrogen, Female Aging

Introduction

As women begin the aging process, changes occur that are clinically related to differences in their hormone levels. One significant sign of aging in women occurs when menstrual periods cease permanently. The cessation in the menstrual flow is known as menopause. Menopause is a part of the aging process in women that occurs as a result of decreased hormone levels. The time before menopause is called perimenopause and is characterized by infrequent periods, changes in period duration, and physical changes to the reproductive tract. While menopause is a normal part of the aging process for women, it usually occurs between the ages of 45 and 55 years. One of the most significant components of menopause is that the ovaries stop making the hormones estrogen and progesterone. As these hormone levels decrease, menstrual periods stop; ovaries stop releasing eggs; the vaginal walls become thinner, dryer and less elastic; and the risk of yeast infections increases. Other physiological occurrences that are separate from the reproductive tract include hot flashes, moodiness, headaches, and insomnia [1]. Women face decreases in breast tissue, short-term memory problems, and lowered libido (sex drive) and responsiveness. The urinary tract is also affected demonstrating increased frequency and urgency in urination. Muscle tone can also be affected in the pubic area resulting in the vagina, bladder, and uterus falling out of position or prolapsing. With all of these changes inherent in the reduction of estrogen and progesterone, it is important to see why replacement of these hormones is being examined. Hormone therapy with estrogen and/or progesterone may

help menopause symptoms, especially vaginal dryness, hot flashes, and pain during intercourse. Hormone therapy also has numerous risks associated with its use.

More than 50 years of experimental studies have focused on improving the health status of women as they age examining the potentials of replacing the estrogen lost as women age. Hormone replacement therapy (HRT) focuses on replacing estrogen to decrease mortality, cardiovascular disease, osteoporosis fractures, urogenital atrophy, colon cancer, dementia, and much more [2]. Hormone replacement therapy research is conclusive in some areas with substantiated positive and negative outcomes. However, in many arenas, HRT outcomes are glaringly inconclusive with clinicians seeking more substantial evidence that hormone replacement is the best route for the aging woman.

Background

Hormone replacement therapy, or HRT, for health issues affecting aging women has been considered as a treatment option for more than 30 years. HRT, as a form of clinical treatment, has been considered for numerous other conditions for more than 90 years [3]. HRT is defined as any form of therapy that provides a patient with a hormone as either a replacement for a naturally occurring hormone or as a supplement to a naturally occurring hormone. HRT can replace or substitute for natural biological substances. Common hormones for replacement therapy include thyroid replacement hormones [4], testosterone replacement [5] and growth hormones [6] supplementation.

Physiology of Aging

A significant event for women governed by hormones is menopause, which typically occurs at age 50 or greater. The natural production of the hormone estrogen drops significantly in women during menopause. The most common menopausal symptoms include hot flashes that disturbs sleep at night and interferes with activities during the day; vaginal dryness that causes discomfort and interferes with sexual activities; and changes in reproductive ability. Hot flashes cause the skin to appear flushed or red and are followed by sweating and shivering. The decrease in estrogen levels causes vaginal and urinary tract changes that make normal sexual activity painful.

As females age, significant physiological changes take place that affect the natural production of two female specific hormones, estrogen and progesterone. Estrogen and progesterone are important

in regulating the menstrual cycle and supporting pregnancy. The hormones are produced by the ovaries, which are two small oval-shaped organs found on either side of the uterus. Years before menopause, known as peri-menopause, ovaries begin to shrink. At this time the levels of estrogen and progesterone fluctuate resulting in irregular menstrual cycles along with unpredictable episodes of heavy bleeding. Perimenopause can last several years before menstrual periods eventually stop. The actual beginning of menopause is marked by the last menstrual period. Menopause is not considered as implemented until a female has at least 12 consecutive months without a menstrual period occurring. This end of menstrual periods cannot be due to being pregnant, breast feeding, nor as a result of pharmacological interruptions (some medicines may interrupt menstrual cycles). Menopause has not occurred if there is any spotting or bleeding. Menopause naturally occurs for most women between the ages of 45 and 55. Surgical procedures such as a hysterectomy, which is the removal of the uterus, can terminate menstrual cycles. The menstrual cycle ends, but with the remaining ovaries, menopause still occurs naturally. Menopause will occur immediately if both ovaries are removed. Whether menopause occurs naturally or surgically, symptoms include a decrease in estrogen levels. Decreases in estrogen levels can be small or large changes, meaning that the changes can vary greatly among women. Women can have multiple symptoms or few if any, while some may last for years and others for several months.

Solutions

To relieve the symptoms of menopause, physicians may prescribe hormone therapy. This can involve the use of estrogen alone or a combination of estrogen and progesterone or progestin (the synthetic form). Together these hormones assist menstrual cycle regulation. The addition of progestin prevents the hyperplasia (increased growth) of cells lining the uterus. So women who have had a hysterectomy do not receive progestin as a part of their hormone therapy. HRT can be continuous (daily use) or cyclic (periodic within a month). The therapy depends upon the purpose. Women suffering from vaginal pain, may receive a cream to relieve dryness and urinary leakage. Woman experiencing hot flashes may be prescribed an oral medication, a patch, or a vaginal ring (slow release hormone).

Menopausal women have other physiological changes that effect their health and can be accelerated or affected by HRT. Health risks associated with menopause include increased incidence of heart disease and osteoporosis. Many scientist believed that these health risks were associated with estrogen levels and hoped that estrogen replacement would help protect against these conditions while relieving menopausal symptoms.

Medical research focused on two types of studies to investigate the benefits of HRT. Observational studies and clinical trials were study types that produced the most valid results. Observational studies followed medical and lifestyle activities of women but provided no interventions. The objective was to determine possible relationships (benefits or harm) that resulted in illness or health. The research tracked individuals over time to determine if the women on HRT those not on HRT had different outcomes in specific areas. Other factors that influenced outcomes may or may not have been examined conclusively. Clinical trials were more rigorous and controlled and compared specific medical interventions such as the use of HRT. Researchers attempted to control all of the experimental conditions so that the two groups were compared based upon the HRT intervention. In observational studies, woman who were on HRT were often healthier, had better access to healthcare, and were more willing to follow the prescriptive regimen.

Observational studies looked for predictors and biological markers for disease. Clinical trials, on the average, had more reliable information since women were from similar backgrounds (age, education, health, and other factors). Clinical trials were designed to test for the effects of HRT on menopausal risk factors including heart

disease, osteoporotic fractures, and breast and cervical cancer. Researchers of each type of study were attempting to determine a causal link (specific medical outcome).

While these intensive medical research activities were on-going, women were receiving HRT for menopausal symptoms. The studies included women from diverse backgrounds such as white, black, Hispanic; ages 50 through 79; continuous hormone use and sporadic; normal to high BMI, tobacco use and non-tobacco use; and hypertension. Some studies demonstrated improved outcomes of these health risks while improving, reducing, or eliminating the menopausal symptoms. Other studies directly showed a higher incidence of risk outcomes such as cancer, cardiovascular disease, and osteoporosis. In these studies, the increased risk expression was so evident, that the clinical trials (of estrogen alone and/or estrogen-progestin) were terminated, because a direct link of HRT and the risk of heart disease, high blood pressure, diabetes, and obesity was discovered. Estrogen plus progestin increased the risk of stroke by 41%, while decreasing the risk of hip fractures by 34%. Women on this HRT had twice the incidence of dementia and reduced cognitive function and the symptoms of incontinence were worsened. The risks for the population outweighed the benefits. In studies showing the use of estrogen alone a demonstrated increased risk of stroke and pulmonary disease events was obvious, this included side effects such as deep vein blood clots. The benefits to women using estrogen alone showed a marked decrease in the risk of breast cancer. Overall, clinical trials demonstrated that the risks outweighed the benefits.

Conclusion

Because of longer lifespans, women are spending more time in their menopausal years. Clinicians who prescribe hormone replacement therapy (HRT) treatment to woman patients over 50 also provide closer monitoring of the treatment outcomes [7]. Synthetic HRT includes estrogens and progesterone that are not bioidentical, but bioequivalent. Synthetic hormone replacement may produce side effects that are clearly evident in clinical trials. The controversy may not be resolved or eliminated for years. While clinicians continue to prescribe HRT [8] there are some basic findings that are evident. HRT can improve the quality of life of women with hypo-estrogenic symptoms [3]. Long-term HRT is not a good risk for women with a family history of breast cancer or osteoporosis. The observational and clinical trials both point to restriction of the use of hormone therapy. HRT should not be considered as a therapy to reduce or prevent heart disease. HRT may actually increase the chances of a heart attack and breast cancer.

Benefits

Benefits for some women have been demonstrated in HRT treatment for menopausal symptoms. Overall, with the examination of all current studies, it is clear there is greater evidence or support of the demonstration of increased risk, that outweigh the benefits for some women. The risks that are in the target therapies are not supported for all women. Menopausal symptoms vary considerably and are related to social class [9], ethnicity [10], and culture [11]. The studies that are related to social class, ethnicity and culture give us a clear picture that research must be expanded to give a clearer picture of the impact and issues, particularly among women in Arab nations. Clinical and observational studies demonstrate that HRT can provide relief of menopausal symptoms, especially vasomotor and urogenital symptoms (hot flashes and incontinence). Research is ongoing. The Women's Health Initiative (WHI) continues to explore the extent of efficacy, safety, and tolerability of HRT in a number of ways.

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