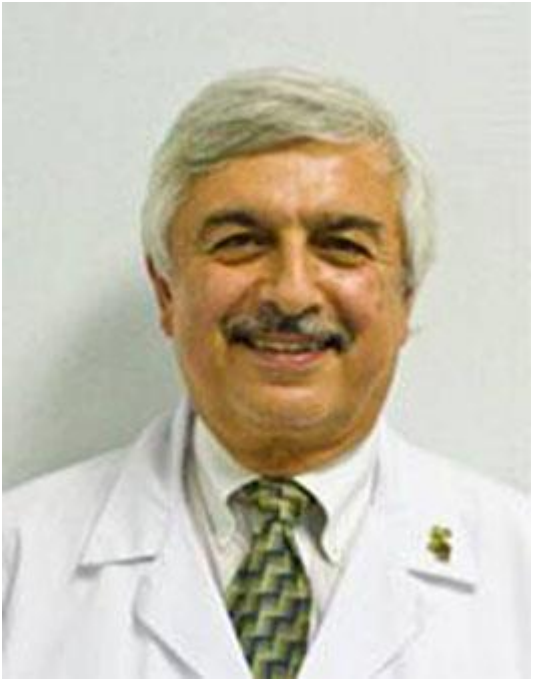
29 NEXENTURY

Flavonoids



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Intravenous apply of Flavonoids and Ascorbic Acid as a Clinical Treatment of Post-Menopausal Syndrome.

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Introduction

Menopause is defined as the final menstrual period and usually confirmed when a woman has missed her periods for 12 consecutive months (in the absence of other

obvious causes). Menopause is associated with reduced functioning of the ovaries due to aging, resulting in lower levels of estrogen and other hormones. It marks the permanent end of fertility. Menopause occurs, on average, at age 51 though it is not uncommon for it to happen at 40s.

Cessation in the secretion of estrogen and other female hormones will cause disorders to the body's system, giving rise to symptoms of menopause. The most commonly observed symptoms of menopause are hot flushes, night sweating, insomnia, vaginal dryness, moods swing, loss of concentration, osteoporosis and hypercholesterolemia.

Currently, menopause is mostly treated with Hormone Replacement Therapy (HRT), with synthetic female hormones (estrogen & progesterone), with the objective to relieve or eliminate the menopause related symptoms. However, clinical researches showed that HRT increases the risk of breast and endometrial cancer.

Considering the underlying risk factors of HRT, a new therapy for menopause is invented to provide the menopaused women a safer alternative to relieve the menopausal symptoms, with a plant derived bioactive substances – flavonoids, in combination with ascorbic acid (vitamin C).

Flavonoids are water soluble polyphenolic molecules containing 15 carbon atoms and is belong to the polyphenol family. The flavonoids consist of 6 major

subgroups: chalcone, flavone, flavonol, flavanone, anthocyanins and isoflavonoids. It is found to be a very powerful antioxidant with anti-allergic, anti-cancer, antioxidant, anti-inflammatory and anti-viral effects. Clinical studies had revealed that flavonoids intake can prevent the oxidation of low-density lipoprotein, thereby reducing the risk of developing atherosclerosis. Soy derived flavonoids are also effective towards the prevention of heart disease and osteoporosis.

Ascorbic acid or vitamin C is a water soluble vitamin which was discovered in 1937, by a Hungarian biochemist - Albert Szent-Györgyi, who studied its biological functions and awarded Noble Prize of Physiology in 1937. Vitamin C is an essential nutrient which takes part in many biochemical processes in the body. It is also a powerful antioxidant which protects the body cells against oxidation. Clinically, vitamin C shows the effects in promoting collagen synthesis, hence will keep the skin in young and healthy conditions. Some study revealed that vitamin C helps to repair endothelial damages with timely collagen synthesis, hence prevents myocardial infraction and other blood vessels occlusion.

Combination of flavonoids and ascorbic acid had exhibited synergistic antioxidating and other hormone regulating effects in the body, which lead to the relieve of menopausal symptoms, when both compounds are apply intravenously. The combination of these 2 bioactive substances is what made Albert Szent-Györgyi

a laurettes of Noble Prize of medicines.

Details

600 menopause women age 40-65 are gathered to take part in this clinical study, where all of them are apply with 2000mg of flavonoids + 500mg of ascorbic acid daily, after which they shall be observed for one more month to evaluate the benefits from the treatments.

Prior to the treatments, all subjects has the total cholesterol level from 245-320mg/dL (high cholesterol), and bone densitometry score of -1.6 to -2.5 (suggestive of osteopenia). All subjects have at least 3 occasions of hot flushes a day, suffering of insomnia everyday with night sweating and dry skin.

Cholesterol level of all subjects are checked weekly, so as densitometry, with daily observation on the occurrence hot flushes, sleeping pattern, night sweating and skin texture. All subjects will be observed for one month after the completion of this study.

Results

Upon the first week of apply, all subjects recorded an average of 5.8% decrease in total cholesterol level, with 7.5% improvement in densitometry (increased bone density). Occurrence of hot flushes reduced to once a day at the 7th day treatment, firmer and smoother skin

texture and average of 6.3 hours deep sleep everyday without night sweating.

On the 2nd week, total cholesterol level is further reduced at the average of 6% from last week, and bone density increased another 8.3% from result of the last week. At this period, there's no more hot flushes. All subjects sleep in the average of 7.5 hours at night without night sweating.

At the end of the study, total cholesterol level recorded the average decreased of 33% and bone density increased 26% in 30 days. As at this date, no more night sweating or hot flushes are reported in all subjects.

Conclusion

Flavonoids and Ascorbic acid, when used in combination and apply, can exert a synergistic hormone regulating effects which are curative towards menopause syndrome, exhibited by the reduction in total cholesterol level, increased bone density and elimination of hot flushes, insomnia and night sweating.

Further study is required to determine the hormonal implications of this combination by measuring the plasma estrogen and progesterone level throughout the study.

