

The Mortar & Pestle:

MD Custom Rx's monthly e-newsletter

August 2019



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MDCustomRx.com

Greetings!

Thank you for entrusting in the compounding services at MD Custom Rx to help meet the unique medication needs of your patients. We are excited to share our monthly newsletter with you and look forward to continuing to be your medication problem solvers. Please don't ever hesitate to let us know how we can be of further assistance to you and your practice.



Sincerely,
Dan, Monica and John

Vaginal DHEA May Improve Sexual Function in Women With Breast/Gynecologic Cancer

Breast and gynecologic cancer patients can experience a range of symptoms associated with sexual dysfunction, among them vaginal dryness and dyspareunia. Vaginal estrogen is the gold standard for treatment of vaginal symptoms, but it is a last resort in women with cancer due to safety concerns. There is a need for effective treatment without systemic estrogenic effects.

Vaginal dehydroepiandrosterone (DHEA) may improve sexual function, without negative systemic effects, in women with breast and gynecologic cancer with vaginal and sexual-related complaints. DHEA is a prohormone that is converted in target tissue. Previous work with DHEA has supported the hypothesis that when used vaginally it does not produce systemic effects.

Barton *et al.* of the University of Michigan conducted a study on postmenopausal women with a history of breast/gynecologic cancer who had completed chemotherapy and radiation and had no evidence of disease. Women were eligible if they reported at least moderately severe vaginal complaints present for no less than 2 months. 441 women were randomized to study arms of 3.25 versus 6.5 mg of DHEA versus plain moisturizer (PM). DHEA was compounded into a bioadhesive vaginal moisturizer gel, which was designed to adhere to the vaginal wall. Women inserted the DHEA using a prefilled syringe nightly for 12 weeks, just before sleep and subsequent to any sexual activity. Laboratory tests, maturation index, and vaginal pH were evaluated at baseline and again at 12 weeks.

Vaginal cell maturation was observed in 100% receiving DHEA 3.25 mg, 86% with DHEA 6.5 mg, and 64% with PM. In all arms, a significant reduction in the primary symptom was observed compared with baseline, with severity reduced by almost half, and there were no significant differences between the study arms. “However, the 2 doses of DHEA did significantly improve sexual function, with the 6.5-mg dose improving every single subscale of sexual function except for orgasm,” Barton noted. Systemic DHEA levels increased in each DHEA arm, but were consistent with the normal range for women in that age group. Based on these data, Barton and her colleagues concluded that DHEA improved physiological vaginal health and overall female sexual function more than PM alone.

Reference

[Barton D, Sloan JA, Shuster LT, et al. Physiologic effects of vaginal dehydroepiandrosterone \(DHEA\): Alliance Trial N10C1. Presented at: 2014 Annual Meeting of the Multinational Association of Supportive Care in Cancer/International Society of Oral Oncology; June 26-28, 2014; Miami, FL.](#)

Kojic Acid Applications in Cosmetic and Pharmaceutical Preparations

Kojic acid (KA) and its derivatives have anti-oxidant, anti-proliferative, anti-inflammatory effects, and KA has the ability to protect the skin from UV light, suppress hyperpigmentation, and decrease melanin formation, due to its tyrosinase inhibitory activity. The lightening effect on visible sun damage, age spots, or scars that lead to anti-aging outcomes on the skin are the main therapeutic effect of KA.

See the table below for therapies using KA (Kojic acid) alone and in various combinations with ingredients used for bleaching or depigmenting formulas for melasma and other disorders: GA (Glycolic acid), HQ (Hydroquinone), and VC (vitamin C).

Treatment	Patients	Duration	Results
2% KA, 5% GA	39 patients	3 months	Highly effective in reducing the pigment in melasma patients
2% KA, 10% GA, 2% HQ	40 patients	12 weeks	60% improvement
KA (0.75%), VC (2.5%), 4% HQ	60 patients	12 weeks	4% HQ and 0.75% KA + vitamin C 2.5% are effective topical hypo pigmenting agents in the treatment of facial melasma
1% KA 2% HQ	80 patients	12 weeks	71.87 % improvement
4% KA 2% HQ	100 women	3 months	KA 4% was found to be more suitable in the treatment of melasma

Some adverse reactions and disadvantages are associated with KA in cosmetic application. The main side effect reported is contact dermatitis (especially for sensitive skin) which can be accompanied by irritation, rashes, inflamed skin, itchiness, and pain. Side effects are more likely when KQ is used in a concentration higher than 1%. Long-term use of KA may make skin more susceptible to sunburn. KA should not be used on damaged or injured skin.

Kojic acid works as a lightening agent by reducing melanin production. The amino acid tyrosine is needed to support the production of melanin. Kojic acid inhibits tyrosinase thereby blocking tyrosine from forming. KA has also exhibited antimicrobial properties that can eradicate some common types of bacterial strains (E.g. acne caused bacteria) even in small dilutions. Studies also have shown that KA potentially has antifungal effects, and KA use to treat yeast infections, candidiasis, and ringworm has been reported. Kojic acid is commonly used in cosmetic products, such as creams, lotions, and serums. It is safe to be used in cosmetics in concentration of 1% according to the Cosmetic Ingredient Review Expert Panel (CIREP). Use of higher concentrations and prescription medications should be monitored by a physician. Ask our compounding pharmacist for more information about customized kojic acid preparations.

References

[Biomed Pharmacother. 2019 Feb;110:582-593
https://www.medicalnewstoday.com/articles/319599.php](https://www.medicalnewstoday.com/articles/319599.php)

Compounding Solves Medication Problems

Our professional staff works with physicians, physician assistants, nurse practitioners, dentists, veterinarians and other health care professionals to customize medications that meet specific patient needs.

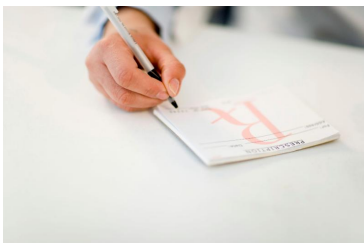
Ask us about how we can help with the following:

- Hormone Therapy for Men and Women
- Pain Management - *Topical Creams and Gels*
- Dermatology
- Palliative Care
- Wound Care
- Pediatric Care
- Autism Spectrum Disorder
- Dental Medications - *Mouth Rinses, Gels, and Topical Anesthetics*
- Veterinary Compounding
- Discontinued Medications or Drug Shortages
- Flavored Medications for People and Animals
- Customized Dosage Forms - *Lollipops, Vaginal Creams, Suppositories*
- Novel Delivery Devices for Accurate Measurement



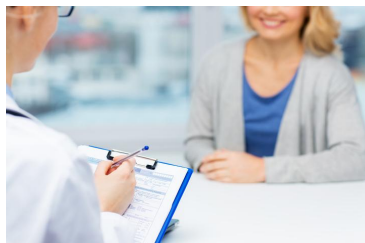
MD Custom Rx Educational Events

We regularly offer educational events at the pharmacy. Be sure to share our events with your patients. **VISIT OUR WEBSITE** to see our schedule and to register. If you are interested in speaking on a topic, please contact the pharmacy.



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