News from Good Life

Thank you for entrusting in the compounding services at Good Life Pharmacies 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.

Be sure to visit our new website at **www.goodliferx.com.** You or your patients can contact us via our HIPAA-compliant forms and learn how compounding can provide solutions for your medication challenges.

Please don't hesitate to let us know how we can be of further assistance to you and your practice.

Sincerely,
Jim Andreesen, R.Ph.
Angie Svoboda, Pharm.D. FIACP
Ray Scott, R.Ph.

Estriol: Emerging Clinical Benefits

Estriol is the main estrogen in pregnancy, but its other benefits are now receiving attention. It is well known that pregnancy has an immunosuppressive effect on many autoimmune diseases such as multiple sclerosis, psoriasis, thyroiditis, uveitis, and rheumatoid arthritis. Emerging evidence indicates that estriol has potential immunomodulatory benefits for many disease states including autoimmune, inflammatory, and neurodegenerative conditions.

Estriol appears to offer a potentially cost-effective approach to a variety of conditions and may offer a wide range of health benefits. Estriol offers considerable benefits for postmenopausal women with reduced risks when compared to traditional hormone therapies. These benefits include improved control of menopausal symptoms and better urogenital health. Moreover, the immunomodulatory role of estriol in reducing proinflammatory cytokines may be an important new therapeutic option for chronic auto-immune and neurodegenerative illnesses. Since estriol is a relatively weak estrogen, there is potential for use in men for conditions such as multiple sclerosis.

Ali et al. of the Texas Tech University Health Science Center reviewed emerging roles for estriol in the

treatment of menopausal symptoms, osteoporosis, cancer, hyperlipidemia, vascular disease, and multiple sclerosis. The group referenced 72 articles from 1974 through 2016 and concluded that transvaginal estriol potentially offers a suitable physiologic delivery and cost-effective alternative to currently available estrogen regimens in selected patients. Additional studies on mode of delivery, safety, and efficacy merit further investigation.

Menopause. 2017 Sep;24(9):1081-1085.

Estriol for Vulvovaginal Atrophy in Postmenopausal Women

A literature review was conducted to evaluate the efficacy and safety of estriol for the treatment of vulvovaginal atrophy in postmenopausal women. Of the 22 studies that met the inclusion criteria; 13 were controlled clinical trials and nine were quasi-experimental, and 1217 women were included. These studies confirmed the efficacy of local estrogens to treat symptoms of vulvovaginal atrophy with few adverse effects reported. Following treatment, serum estriol levels rose, peaking at 1 hour. At the 6-month follow-up, there was no increase in serum estriol in treated women. The available evidence (of low and moderate quality) shows that, when administered vaginally, estriol preparations may be considered as a treatment option for women who have risk factors related to systemic estrogen therapy.

Climacteric. 2017 Aug;20(4):321-330.

Oral vs. Transdermal Hormone Therapy: Effects on Sleep and Vasomotor Symptoms

Poor sleep quality is common in recently menopausal women. To determine whether two different formulations of hormone therapy (oral conjugated equine estrogens- CEE- or transdermal 17β-estradiol plus cyclic progesterone, or placebo) affected sleep, physicians and researchers from prestigious hospitals and universities including the Mayo Clinic, Brigham and Women's Hospital, Harvard Medical School, the Department of Obstetrics and Gynecology at University of Washington, Yale University School of Medicine, and Emory University, analyzed findings from the Kronos Early Estrogen Prevention Study (KEEPS).

Participants completed the Pittsburgh Sleep Quality Index at baseline and during the intervention at 6, 18, 36, and 48 months. Global sleep quality and individual sleep domain scores were compared between treatments and correlated with vasomotor symptom scores. Scores for sleep satisfaction and latency improved with both types of hormone therapy. The score for sleep disturbances improved more with transdermal estradiol than CEE or placebo. Global sleep scores significantly correlated with vasomotor symptom severity.

Menopause. 2017 Aug 21. [Epub ahead of print]

Oral vs Transdermal Estrogen Therapy: Sexual Function

Sexual dysfunction, an important determinant of women's health and quality of life, is commonly associated with declining estrogen levels around menopause. An ancillary study of the Kronos Early Estrogen Prevention Study (KEEPS) compared the effects of oral versus transdermal estrogen therapy on sexual function in early postmenopause. This 4-year prospective, randomized, double-blinded, placebo-controlled trial enrolled 670 healthy women aged 42 to 58 years who were within 36 months of their last menstrual period. Women were randomized to either 0.45 mg/day oral conjugated equine estrogens (o-CEE), 50 µg/d transdermal 17β-estradiol (t-E2), or placebo. Participants also received 200 mg oral micronized progesterone (if randomized to o-CEE or

t-E2) or placebo (if randomized to placebo estrogens) for 12 days each month.

Transdermal estradiol treatment was associated with a significant increase in mean lubrication and decreased pain compared with placebo. Transdermal estradiol treatment resulted in fewer women with low sexual function compared with placebo, while CEE produced no significant benefit.

JAMA Intern Med. 2017 Oct 1;177(10):1471-1479.

Low Dose Topical Estriol Gel Relieves Sexual Pain

This study evaluated the effectiveness of the application of 0.005% estriol gel to the vulvar vestibule in the management of postmenopausal dyspareunia. Postmenopausal women with dyspareunia were enrolled in the study and instructed to use a fingertip to apply estriol vaginal gel to the vulvar vestibule daily for three weeks and then twice weekly for up to 12 weeks. Assessment of symptoms (dyspareunia and cotton swab test) and signs of vestibular atrophy were performed, and changes between baseline and weeks 3 and 12 were assessed. Adverse events were recorded. A total of 63 women were included. Of the 63, 59 (93.6%) completed the 12-week treatment period, and four dropped out for vestibular burning [which may have been a result of the base used for this particular preparation]. Dyspareunia improved or resolved by week 12 in 81.4% of patients. The patients also showed a statistically significant reduction in vestibular atrophy and cotton swab test at the end of treatment.

Eur J Obstet Gynecol Reprod Biol. 2016 Dec;207:121-124.

We welcome your questions.

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