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MDCustomRx.com

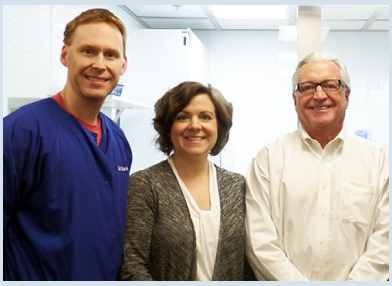
The Mortar & Pestle:

MD Custom Rx's monthly e-newsletter

October 2016

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

CUSTOMIZED WOUND CARE FOR DIABETIC FOOT ULCERS?

Diabetes is a leading cause of non-traumatic lower extremity amputation, which is often preceded by a non-healing ulcer. The lifetime risk of foot ulceration in people with diabetes is 15% - 20% and more than 15% of foot ulcers result in amputation of the foot or limb. Diabetic foot ulcers result from factors including peripheral neuropathy, decreased blood supply, and high plantar pressures, and pose a significant risk for morbidity, limb loss and mortality. The critical aspects of the wound healing mechanism and physiology in patients with diabetes necessitate the selection of an appropriate treatment strategy based on the complexity and type and grade of the ulcer. In addition to systemic antibiotics and surgical intervention, wound care is considered to be an important component of diabetic foot ulcer management.

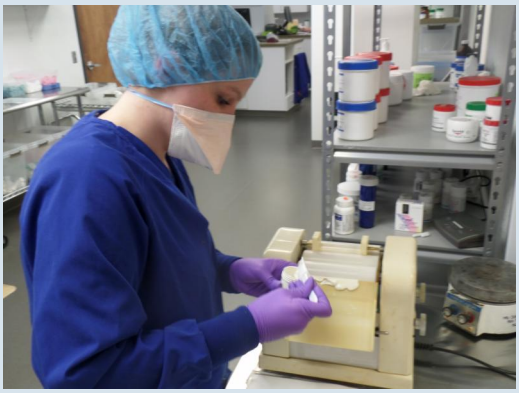
Our compounding pharmacist works with physicians to customize would care preparations which contain the most appropriate ingredients in the base which is best for each wound and location. Compounds can contain medications such as antibiotics, phenytoin, misoprostol, nifedipine, arginine, aloe vera, and insulin. Antibiotic selection can be based on culture and sensitivity reports.

Insulin has been used in wound healing to increase wound collagen, granulation tissue, wound tensile strength, and local production of insulin-like growth factors by fibroblasts. In one study, treatment with topical insulin (1 U/cm2 wound area) resulted in a greater reduction in pressure ulcer size as compared to use of normal saline-soaked gauze.

References:

World J Diabetes. 2014 Aug 15Í¾ 5(4): 546-556.
Ostomy Wound Manage. 2016 Jun;62(6):16-23.

UREA, ARGININE AND CARNOSINE CREAM FOR TREATMENT OF SEVERE XEROSIS OF THE FEET IN PATIENTS WITH TYPE 2 DIABETES



Cutaneous complications are common in diabetes, with approximately 30% of patients experiencing some skin problem; these may also be an early indicator of undiagnosed diabetes. In particular, xerosis (abnormally dry skin) is frequently observed in diabetic patients. Skin xerosis and callous formation could be risk factors for the development of diabetic ulcers. Skin hydration is a relevant preventive strategy to maintain a healthy foot. Emollient and moisturizing products can repair the epidermal barrier function and ameliorate xerosis. However, few studies have been conducted in diabetic patients to assessing whether this treatment can help correct alterations in functional and mechanical properties of diabetic skin.

Urea is considered an effective hydrating and emollient topical product. Urea is not just a simple emollient compound but it is able to improve the differentiation of keratinocytes. Arginine is an important substrate for Nitric Oxide (NO) formation. In diabetic skin, a deficit in NO production has been demonstrated. This reduction could be due to an enhanced arginine consumption linked to high arginase enzymatic activity. Carnosine is able to interfere with advanced glycosylated end product formation; this action has been also demonstrated for urea.

In a randomized, 8 month, assessor-blinded, controlled trial of 40 patients with type 2 diabetes, aged 40-75 years, twice daily application of a cream containing urea 5%, arginine 0.4% and carnosine 0.01% (UC) showed greater efficacy in the treatment of severe xerosis of the feet in type 2 diabetic patients than standard high content glycerol-based (40%, or 15% with 8% white petrolatum) topical emollient products (SEC). Primary outcomes were evaluated at baseline and after 4, 12 and 32 weeks. Skin hydration and desquamation were also objectively evaluated by means of a bio-impedance skin analysis device at baseline and at week 32.

UC induced greater hydration than SEC, with a 91% reduction at week 32 in Xerosis Assessment Score vs. baseline. After 4 weeks, compared with the SEC-treated group, the XAS score in the UC-treated group was significantly lower. Overall Cutaneous Score was reduced by 27% from baseline to end of the study in the UC group, and increased by 8% in the SEC group. At month 8, skin hydration and desquamation evaluated by the digital skin analysis system statistically improved in UC-treated subjects in comparison with baseline and SEC group values.

Researchers concluded that using a urea, arginine and carnosine cream for 8 months increases skin hydration and improves skin dryness in type 2 diabetic patients in comparison with a glycerol-based emollient cream, with a greater efficacy observed as early as 4 weeks into treatment.

References:

Curr Med Res Opin. 2015 Jun;31(6):1063-9.
BMC Dermatol. 2012 Sep 25;12:16.

CURCUMIN ENEMA FOR MILD-TO-MODERATE DISTAL ULCERATIVE COLITIS

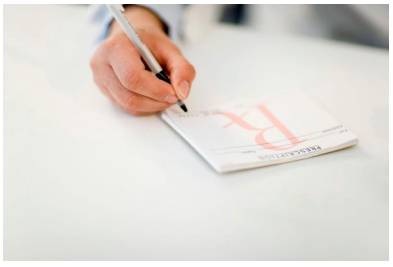
Curcumin, an active ingredient of turmeric with anti-inflammatory properties, has been demonstrated to be useful in experimental models of ulcerative colitis (UC).

A randomized, double-blind, single-center pilot trial was conducted in patients with distal UC (<25 cm involvement) and mild-to-moderate disease activity. Forty-five patients were randomized to either NCB-02 (standardized curcumin preparation) enema plus oral 5-ASA or placebo enema plus oral 5-ASA. Primary end point was disease response, defined as reduction in Ulcerative Colitis Diseases Activity Index by 3 points at 8 weeks, and secondary end points were improvement in endoscopic activity and disease remission at 8 weeks.

Response to treatment was observed in 56.5% in NCB-02 group compared to 36.4% in placebo group. At week 8, clinical remission was observed in 43.4% of patients in NCB-02 group compared to 22.7% in placebo group and improvement on endoscopy in 52.2% of patients in NCB-02 group compared to 36.4% of patients in placebo group. Per protocol analysis revealed significantly better outcomes in NCB-02 group, in terms of clinical response (92.9% vs. 50%), clinical remission (71.4% vs. 31.3%,), and improvement on endoscopy (85.7% vs. 50%).

In this pilot study, researchers found evidence that use of NCB-02 enema may tend to result in greater improvements in disease activity compared to placebo in patients with mild-to-moderate distal UC. The role of NCB-02 as a novel therapy for UC should be investigated further.

Reference:
J Crohns Colitis. 2014 Mar;8(3):208-14.



Write a Prescription for a Compound

Learn more about how to write a prescription for a compounded preparation.
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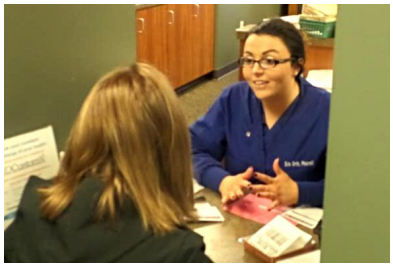

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