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The Mortar & Pestle:

MD Custom Rx's monthly e-newsletter

August 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

Rectal and Transdermal Options for Patients Who Can't Swallow

Dysphagia (difficulty or discomfort in swallowing) can affect 30% to 65% of stroke victims. Feeding-swallowing issues affect 15% of the elderly and are also common with advanced dementia. Increased difficulty with swallowing oral medications increases the risk of aspiration. Seizure disorders occur in about 13% of palliative care cases, and treatment options become limited when feeding and swallowing disorders develop. Hospice and palliative care patients may also develop complications such as impaired gastrointestinal absorption, nausea, vomiting, delirium, or cognitive impairment, all of which would complicate the ability to take required oral medications. These are some of the reasons why alternative routes of administration, including transdermal or rectal, are utilized in the elderly and those receiving end-of-life care.

Suppositories are a reasonable option when limited routes of administration are available for seizure prophylaxis in palliative and geriatric care. Advantages of rectal administration include limited patient or caregiver education required, avoidance of first-pass metabolism, and rapid onset of action. Disadvantages include potentially significant variation in dose required for desired effects or to maintain therapeutic levels

(dependent on the pharmacokinetics of the specific drug as well as the preparation of the suppository), variable absorption, caregiver acceptance, and patient compliance. Rectal medications should be avoided in situations of thrombocytopenia, neutropenia, diarrhea, and rectal disease or resection.

Transdermal administration is often preferred for patients who can't swallow, including those who are not candidates for rectal therapy. Transdermal preparations are applied topically and absorbed through the skin. The extent of systemic absorption is influenced by the base and compounding technique.

Case Study:

An 83-year-old male veteran with a history of vascular dementia, right basal ganglion hemorrhagic stroke, dense left hemiplegia, expressive aphasia, poststroke seizure disorder with breakthrough partial seizures, and dysphagia was admitted to inpatient hospice for progressive decline and an inability to swallow oral levetiracetam while also lacking intravenous or percutaneous endoscopic gastrostomy (PEG) tube access. Given the patient's high risk of seizures and his inability to swallow, rectal valproic acid (VPA) suppositories 500 mg twice daily were prescribed and compounded. During 13 months of therapy, the patient remained seizure-free. VPA levels prior to discontinuation of the rectal suppository and follow-up labs after conversion to the oral solution demonstrated a 1:1 conversion between dosage forms. In general, while the absorption and peak serum concentrations of valproic acid suppositories can be lower than that of oral formulations, serum monitoring can ensure adequate dosing. Other antiepileptic medications that can be administered rectally include carbamazepine, phenobarbital, and diazepam.

Our compounding pharmacist can answer your questions and work together with physicians, patients and their families to compound the most appropriate dosage form for each patient and solve medication problems.

Consult Pharm. 2016 June;31(6):313-9.

Treatment of Alopecia Areata with Squaric Acid Dibutylester

Topical immunotherapy using potent contact allergens, such as squaric acid dibutylester (SADBE), can be used to treat alopecia areata. However, there are conflicting reports regarding the best protocol for its administration, particularly with regard to the necessity of an eczematous response after the initial sensitization treatment. Vedak and Kroshinsky of the Department of Dermatology, Massachusetts General Hospital and Harvard Medical School, sought to assess the impact of initial sensitization on subsequent hair regrowth and published a retrospective review of the use of SADBE in the treatment of alopecia areata in 14 patients. Eleven of 14 patients underwent initial sensitization before initiating treatment. Three of these patients had an eczematous reaction after 1 attempt, 5 after 2 or more attempts, and 3 failed to

develop a clinical reaction. Four of 14 initiated treatment without a clinical reaction or a previous sensitization. Eleven of 14 patients experienced regrowth, 7 with previous sensitization and 4 without.

Several studies have compared the efficacy of SADBE to other treatments vs placebo with favorable results. In summary, SADBE sensitization regimens and reactions vary widely, and the absence of an initial eczematous reaction to sensitization does not predict a failed response with continued SADBE treatment.

Clin Dermatol. 2015 May-Jun;33(3):300-4.
J Am Acad Dermatol. 2015 Sep;73(3):471-6.

A Novel Compounded Analgesic Cream (Ketamine, Pentoxifylline, Clonidine, DMSO) for Complex Regional Pain Syndrome Patients

Evidence suggests that complex regional pain syndrome (CRPS), formerly termed Reflex Sympathetic Dystrophy, is a manifestation of microvascular dysfunction. Topical combinations of alpha-2-adrenergic receptor agonists or nitric oxide donors with phosphodiesterase or phosphatidic acid inhibitors formulated to treat microvascular dysfunction have been shown to reduce allodynia in a rat model of CRPS-I. Driven by these findings, Russo and Santarelli assessed the outcomes of CRPS patients treated with a compounded analgesic cream (CAC) consisting of ketamine 10%, pentoxifylline 6%, clonidine 0.2%, and dimethyl sulfoxide 6% to 10%.

A detailed report was compiled for each of 13 CRPS patients who used CAC, and was comprised of baseline characteristics, including CRPS description, previous treatments, and pain scores (numerical pain rating scale of 0 to 10). Recorded outcomes consisted of pain scores, descriptive outcomes, and concurrent medications/treatments. A basic analysis was performed to determine the effectiveness of the CAC.

Nine patients (69%) reported pain/symptom reduction (4.4 ± 2.1 vs. 6.3 ± 1.9) with use of the CAC. Six patients reported sustained benefits after 2 months of CAC use, and 2 patients reported complete resolution of pain/symptoms: one had early CRPS-I and the other received a partial CRPS diagnosis. An otherwise medication refractory and intolerant patient found partial benefit with the CAC.

These results demonstrate promise for this topical combination as a useful treatment in multimodal therapy for patients with CRPS, with the potential to resolve pain/symptoms in early CRPS patients.

Pain Pract. 2016 Jan; 16(1):14-20.

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