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The Mortar & Pestle:

MD Custom Rx's monthly e-newsletter

August 2017

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

Neuropathic Pain

Neuropathic pain is a common condition that is often resistant to "standard" treatment. Patients are usually dissatisfied the results of their treatment. There is increasing interest in the optimization and personalization of pharmacotherapy based upon the underlying mechanism(s) of neuropathic pain and the patient's symptoms. The management of chronic neuropathic pain is challenging and is best achieved with the use of a multidisciplinary team.

Continuum (Minneap Minn). 2017 Apr;23(2, Selected Topics in Outpatient Neurology):512-532.

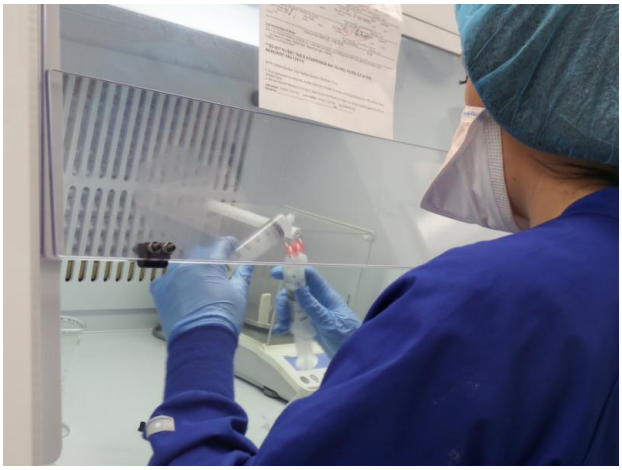
Topical Gabapentin Gel Alleviates Allodynia and Hyperalgesia in Neuropathic Pain Model

Systemic gabapentin is a mainstay treatment for neuropathic pain, although therapeutic doses usually produce intolerable side effects. In a chronic sciatic nerve constriction injury neuropathic pain model, topical application of gabapentin 10% gel relieved neuropathic pain without unwanted systemic side effects. Systemic gabapentin exhibited similar effects on pain but was associated with motor impairment.

Eur J Pain. 2017 Apr;21(4):668-680.

Topical and Intranasal Analgesic Therapy in a Woman with

Refractory Postherpetic Neuralgia



Postherpetic neuralgia (PHN) is a chronic complication of herpes zoster infection. Commonly referred to as shingles, herpes zoster results from the reactivation of the varicella-zoster virus usually contracted during childhood in the form of chickenpox. The virus that had remained dormant in a sensory neuron re-manifests as a painful, blistering, and vesicular rash along a dermatome or an area of skin innervated by a single spinal nerve. While the hallmark lesions/rash of herpes zoster usually clears within 2 to 4 weeks, 20% of people may experience pain in the form of PHN that persists after the rash has healed. The pain is a consequence of peripheral nerve damage caused by the herpes zoster attack. The duration of pain required for a diagnosis of PHN varies greatly from 1 to 9 months after the onset of the rash, but the pain can persist for years. 15% of patients report pain at 2 years. Risk factors for PHN include advanced age, female gender, chronic disease, immunocompromised condition, and a greater severity of outbreak and pain during the acute phase. The pain experienced in PHN is often refractory to therapy, with as many as half of patients failing to respond to any conventional (commercially available) treatment. Other patients may experience limited efficacy despite being on multiple agents. Treatment options to date have mainly been centered on oral therapies, including tricyclic antidepressants, opioid analgesics, corticosteroids, and anticonvulsants (gabapentin, pregabalin). Therapeutic doses of these oral medications often carry a high risk of adverse effects and even addiction. Current treatment options for PHN also include topical lidocaine and capsaicin.

Case Report:

A 78-year-old African American woman was referred to the pharmacotherapy consult service with a diagnosis of refractory PHN of the head and neck. This was a recurrent episode of PHN following an original diagnosis two years earlier. Pain was noted along the right sternocleidomastoid and masseter muscles per the referring physician. Insomnia and difficulty in speech secondary to pain were also noted. Medication history included previous treatment with oral amitriptyline and topical capsaicin 0.025%. Oral amitriptyline was discontinued due to cognitive dysfunction and fatigue. Topical capsaicin was not tolerated due to local pain and discomfort on application of the cream. Her current medication regimen consisted of oxycodone 20 mg by mouth twice daily, gabapentin 300 mg by mouth three times daily, oxcarbazepine 150 mg by mouth three times daily and tocilizumab administered intravenously using weight-based dosing once monthly. Further increases in titration to the oral gabapentin and oxcarbazepine were not possible due to patient-reported adverse effects.

The patient described her pain as "electric," "tingling," and occurring with "bursts of lightning," which originated and were concentrated at the base of the jaw and subsequently radiated up the lateral and posterior right sides of the cranium. She complained of skin and oral mucosal sensitivity, which was painful to the touch, on the inside and outside of her right cheek. The patient further complained of pain when swallowing, which had led to the inability to eat full meals. Due to the acutely severe and intense pain and the patient's severe decline in quality of life, it was decided that the addition of a lidocaine 5% patch alone would likely be insufficient for pain relief.

Hohmeier and Almon of the University of Tennessee outlined a patient-specific, stepped approach to topical and intranasal analgesic pharmacotherapy. The treating team decided to continue her baseline oral medications and also to initiate immediate treatment with a compounded combination topical analgesic cream composed of gabapentin 6%, ketoprofen 10%, amitriptyline 2%, and lidocaine 5%, due to anecdotal successful experiences using this combination for patients with other neuropathic pain syndromes. Directions were to apply sparingly to the face and neck at the site of pain no more than four times daily, avoiding the area around the eyes. During follow-up conducted by the pharmacy team three days after the initiation of treatment, the patient described her baseline pain as "quieted down" on cream but complained that pain "flare-ups" still remained a problem. At this point, the referring physician and consulting pharmacist made a change to a new topical analgesic cream formulation of gabapentin 6%, ketoprofen 10%, lidocaine 5%, and ketamine 10%. Topical ketamine replaced the amitriptyline due to the patient's concern about side effects based on her previous experience with oral amitriptyline. A topical analgesic gel was added, which contained gabapentin

10% compounded in Orabase® (a gel containing benzocaine 20%) for application to the oral mucosa. At follow-up with the consulting pharmacist one week after the initiation of the new treatment, the patient reported further decreases to the overall pain. The patient described pain as being at a tolerable level, which allowed her to sleep through the night and 5/10 on a VAS. However, breakthrough pain was still reported to be 8/10. The previous topical regimens were continued, and the addition of a ketamine 100 mg/mL (10%) metered-dose intranasal spray delivering 0.1 mL/spray was initiated. Patient directions were to inhale 1 spray (0.1 mL), alternating nostrils 90 seconds apart, up to three times daily (with a maximum of 5 sprays per dose) for breakthrough pain. The patient was asked to lie in a supine position with her neck extended at a 45-degree angle and to maintain this position for 30 seconds after administration, based on successful intranasal ketamine therapy reported in the literature.

Two weeks later, the patient reported further reduction in pain both at rest and when speaking, eating, and drinking. Breakthrough pain was managed with the intranasal ketamine regimen, and an overall reduction in baseline pain to 4/10 was experienced with this combination, multimodal pain treatment. The patient reported relief of breakthrough pain within 2-5 minutes after use of intranasal ketamine, on average 2-4 sprays (0.2-0.4 ml) of the solution. Throughout the duration of therapy, no adverse effects were reported for either the nasal or topical therapies. Therapy was continued for the next several months until full, spontaneous remission of pain. One year later, the patient reported a third recurrence of PHN. The patient's previous three-prescription regimen was ordered and the patient again reported pain score reduction on the VAS from 10/10 to 5/10.

Case Reports in Medicine 2015, Article ID 392874

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