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PRESCRIPTION COMPOUNDING FOR

PAIN MANAGEMENT

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We customize individual prescriptions for the specific needs of our patients.
DYSMENORRHEA PAIN

The following study found that guaifenesin may be useful in the treatment of primary dysmenorrhea - "Guaifenesin as a treatment for primary dysmenorrheal" (J Am Board Fam Pract, 2004 Jul-Aug;17(4):240-6).

BACKGROUND: Dysmenorrhea is highly prevalent and causes much work loss and discomfort. A treatment with a new mechanism of action could benefit women of menstruating age. A study was undertaken to assess the efficacy of guaifenesin as a treatment for primary dysmenorrhea because of its effects of cervical dilation and cervical mucous thinning.

METHODS: Thirty-four subjects with primary dysmenorrhea were enrolled in a double-blind, placebo-controlled study. Three treatment surveys measured 10 symptoms (lower abdominal pain, general abdominal pain, back pain, headache, nausea, diarrhea, constipation, menstrual flow, weakness, and activities of daily living) on a 100-mm visual analog scale. Nonstudy analgesic use was also measured.

RESULTS: Twenty-five subjects returned the first treatment survey, and 17 returned all 3 surveys. Results were nonsignificant, but guaifenesin trended toward being better than placebo for dysmenorrhea pain and associated constitutional symptoms and caused no worsening of symptoms. Lower abdominal mean pain scores from the first survey decreased 38 mm for guaifenesin versus 7 mm for placebo. By the third survey, only 2 of 8 guaifenesin participants took nonstudy analgesics compared with all 9 placebo subjects.

CONCLUSIONS: Guaifenesin may be useful in the treatment of primary dysmenorrhea. A larger study is needed to validate these initial findings. PMID: 15243011

Ketoprofen was effective and well tolerated in treating primary dysmenorrhea in this study - "Ketoprofen, ibuprofen, and placebo in the treatment of primary dysmenorrhea: a double-blind crossover comparison" (J Clin Pharmcol, 1988 Dec;28(12 Suppl):S29-33).

ABSTRACT: “Under double-blind, crossover conditions, 43 women with primary dysmenorrhea received ketoprofen, ibuprofen, and placebo during three consecutive menstrual cycles. Pain intensity and pain relief were determined before and for 6 hours after the loading dose (ketoprofen 150 mg, ibuprofen 800 mg) and before and 2 hours after the maintenance dose (ketoprofen 75 mg, ibuprofen 400 mg). Mean pain intensity difference and pain relief scores consistently indicated greater pain relief after the loading doses of ketoprofen and ibuprofen than after placebo. Significant (P less than 0.05) mean changes that were measured by 13 indices of analgesia after the loading doses of both ketoprofen and ibuprofen indicated greater efficacy for the active treatments than for placebo. The patients’ global evaluations after the loading doses were significantly (P less than 0.05) better for the active treatments than for placebo. The efficacy results were similar after the maintenance doses. The rates of a “good” to “excellent” response were 77% for ketoprofen, 73% for ibuprofen, and 35% for placebo. Ketoprofen and ibuprofen were equally well tolerated, the most frequent adverse experiences being gastrointestinal symptoms for ketoprofen and central nervous system side effects for ibuprofen.” PMID: 3072355

With our state of the art compounding laboratory we have the ability to compound guaifenesin and ketoprofen into one transdermal gel. The potential advantages such a combination may offer over the individual oral dosages of either medication alone are: greater therapeutic effect, fewer systemic side effects, and increased patient compliance.

An example of how you might prescribe follows:

**COMPOUNDED MEDICATION**

<table>
<thead>
<tr>
<th>Guaifenesin 10% / Ketoprofen 20% Transdermal Gel</th>
</tr>
</thead>
<tbody>
<tr>
<td>90gm</td>
</tr>
<tr>
<td>Apply topically to abdomen Q6H PRN</td>
</tr>
</tbody>
</table>
CHRONIC PAIN

The following clinical paper reviews medications that have proven effective in chronic pain disorders and how their use in combination should improve the management of chronic pain. "Pharmacotherapy of chronic pain: a synthesis of recommendations from systematic reviews" (Gen Hosp Psychiatry. 2009 May-Jun;31(3):206-19).

OBJECTIVES: Chronic pain is one of the most prevalent, costly and disabling conditions in both clinical practice and the workplace, yet often remains inadequately treated. Moreover, chronic pain commonly co-occurs with depression, anxiety and somatoform disorders, and adversely affects response of these conditions to psychiatric treatments. This article provides an evidence-based approach to the pharmacotherapy of chronic pain.

METHODS: This narrative review is derived largely from meta-analyses and systematic reviews published since 2005. For a few medications, findings from multiple recent trials are synthesized if a systematic review had not yet been published. Classes of medications are first reviewed, followed by an overview of four common pain disorders: neuropathic pain, low back pain, fibromyalgia and osteoarthritis.

RESULTS: A stepped care approach based upon existing evidence includes (1) simple analgesics (acetaminophen or nonsteroidal anti-inflammatory drugs); (2) tricyclic antidepressants (if neuropathic, back or fibromyalgia pain) or tramadol; (3) gabapentin, duloxetine or pregabalin if neuropathic pain; (4) cyclobenzaprine, pregabalin, duloxetine, or milnacipran for fibromyalgia; (5) topical analgesics (capsaicin, lidocaine, salicylates) if localized neuropathic or arthritic pain; and (6) opioids. Disease-specific recommendations for neuropathic, low back, fibromyalgia and osteoarthritis pain are reviewed.

CONCLUSION: A number of medications have proven effective in chronic pain disorders and their use individually or in combination should improve the management of chronic pain. PMID: 19410099

With our state of the art compounding lab and pharmaceutical knowledge and experience, we can compound several of the above medications into one transdermal cream. These combinations in a transdermal delivery form may help to increase compliance and reduce patient medication costs.

An example of how you might prescribe follows:

### COMPOUNDED MEDICATION

| Ketoprofen 10% / Amitriptyline 2% / Gabapentin 1% |
| Transdermal Cream |
| 90gm |
| Apply sparingly to affected area(s) TID |
LOW BACK PAIN

The results of this study demonstrated that patients with muscle spasm associated with acute low back strain benefited from the use of combination therapy consisting of a nonsteroidal anti-inflammatory agent (naproxen) and a muscle relaxant (cyclobenzaprine) - “Cyclobenzaprine and naproxen versus naproxen alone in the treatment of acute low back pain and muscle spasm” (Clin Ther. 1990 Mar-Apr;12(2):125-31).

ABSTRACT: “Two groups of 20 patients each, with mild to moderate acute low back pain with associated muscle spasm of ten days’ duration or less, were treated with a combination of cyclobenzaprine and naproxen or naproxen alone in a randomized, 14-day open-label trial. Cyclobenzaprine was added to the naproxen regimen as an adjunct to rest and physical therapy for relief of muscle spasm associated with acute, painful, musculoskeletal conditions. The clinical characteristics of each study group, including the number of worker’s compensation patients, were comparable. Combination therapy was associated with less objective muscle spasm and tenderness and greater motion of the lumbosacral spine (P less than 0.05). There were trends toward faster resolution of functional deficits and pain with combined therapy. Combination therapy was associated with more side effects, due primarily to drowsiness from the cyclobenzaprine. The results of this study demonstrated that patients with muscle spasm associated with acute low back strain benefited from the use of combination therapy consisting of a nonsteroidal anti-inflammatory agent (naproxen) and a muscle relaxant (cyclobenzaprine).” PMID: 2141299

With our state of the art compounding lab and pharmaceutical knowledge and experience, we can compound naproxen and cyclobenzaprine into one transdermal gel. This form of delivery may help to minimize the systemic side effects associated with oral dosing.

An example of how you might prescribe follows:

**COMPOUNDED MEDICATION**

**Naproxen 10% / Cyclobenzaprine 0.5% Transdermal Gel**

90gm

Apply sparingly to affected area 2-3x daily
Dysmenorrhea Pain
[ ] Guaifenesin 10% / Ketoprofen 20% Transdermal Gel  
Quantity 90gm  
Directions: Apply topically to abdomen Q6H PRN

Chronic Pain
[ ] Ketoprofen 10% / Amitriptyline 2% / Gabapentin 1% Transdermal Cream  
Quantity 90gm  
Directions: Apply sparingly to affected area(s) TID

Low Back Pain
[ ] Naproxen 10% / Cyclobenzaprine 0.5% Transdermal Gel  
Quantity 90gm  
Directions: Apply sparingly to affected area 2-3x daily

Directions:

All topical compound %s are per 1 ml or 1 gm unless otherwise noted

Patient will pick up at pharmacy  
Please ship to patient

Bill Insurance Plan: ___________________________  ID# ___________________________

Prescriber's Signature ___________________________  Refills: 1 2 3 4 5 6 7 8 9 10 11 12 NR

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