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for the specific needs of our patients.*

JANUARY 2013

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PRESCRIPTION COMPOUNDING FOR

NEUROLOGY

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CHRONIC PAIN

The following clinical paper concludes that methadone is an effective alternative to conventional opioids for chronic pain management when used by experienced clinicians - "Experience of methadone therapy in 100 consecutive chronic pain patients in a multidisciplinary pain center" ([Pain Med.](#) 2008 Oct;9(7):786-94).

ABSTRACT

OBJECTIVE: The objective of the study was to describe the experience of methadone use in 100 consecutive chronic pain patients managed in a single multidisciplinary center.

DESIGN: A chart review of chronic pain patients on methadone therapy initiated at the Wasser Pain Management Center from January 2001 to June 2004.

SETTING, PATIENTS, AND INTERVENTION: Outpatients receiving methadone for chronic pain management in a tertiary multidisciplinary pain center.

OUTCOME MEASURE: Effects on pain relief and function, conversion ratio from other opioids, side effects, and disposition were reviewed.

RESULTS: Charts of 100 methadone patients (age 45 +/- 11 years old; M/F: 3/7; duration of pain 129 +/- 110 months) managed by five physicians and one nurse were reviewed. The main reason for the initiation of methadone therapy was opioid rotation (72%). The average oral morphine equivalent dose was 77 mg/day before methadone therapy, and the methadone dose after initial stabilization was 42 mg with no consistent conversion ratio observed. The mean duration of methadone therapy was 11 months. Most of the patients (91%) were taking concomitant adjuvant analgesics or psychotropic agents, mostly antidepressants and anticonvulsants. The average Numeric Verbal Rating Score before and after methadone treatment was 7.2 +/- 1.7 and 5.2 +/- 2.5 (P < 0.0001). Thirty-five patients discontinued their methadone treatment mainly because of side effects, ineffectiveness, or both.

CONCLUSION: From our experience, methadone is an effective alternative to conventional opioids for chronic pain management when used by experienced clinicians in a setting that allows for close monitoring and careful dose initiation and adjustment. PMID: 18564997

With our state of the art compounding lab and pharmaceutical experience, we have the ability to compound methadone as a troche to meet the unique needs of each of your patients.

An example of how you might prescribe follows:

COMPOUNDED MEDICATION

Methadone 10mg

Troche

#60

**Place 1 troche between cheek & gum and
let slowly dissolve Q8H**

PARKINSON'S DISEASE

The following clinical paper states that men use higher levodopa doses than women -"Large differences in levodopa dose requirement in Parkinson's disease: men use higher doses than women" ([Eur J Neurol](#). 2010 Feb;17(2):260-6).

ABSTRACT

BACKGROUND AND PURPOSE: The characteristics of levodopa dosing are not well described in the literature. The aims were to investigate the use of levodopa in a nationwide Swedish survey and to study the characteristics of low-dose and high-dose patients with Parkinson's disease (PD) in a university hospital.

METHODS: Patients with ≥ 1 and ≥ 2 purchases of levodopa during 2007 were selected from the prescribed drug register. Daily levodopa doses were estimated. Records of 504 patients with PD who visited the neurology clinic at Uppsala University Hospital during 2006-2007 were examined to select a low-dose group (≤ 400 mg levodopa daily, $n = 21$) and a high-dose group (≥ 1200 mg daily, $n = 26$) with at least 5 years of PD duration.

RESULTS: In total, 33 534 levodopa users with ≥ 1 levodopa purchase were found. Daily levodopa dose range was large; median daily dose was 465 mg for men and 395 mg for women ($P < 0.0001$). Almost half (46%) of the patients used < 400 mg levodopa daily. Significantly, more men were treated with doses ≥ 1200 mg daily. Dose and age correlated negatively ($P < 0.0001$). Patients with high dose at 5 years PD duration continuously increased their dosage the following years, whereas low-dose patients did not. The occurrence of dyskinesias was about the same in both groups despite the large difference in levodopa dose.

CONCLUSIONS: We conclude that the levodopa requirement in PD ranges considerably, and that men use higher levodopa doses than women. Levodopa requirement is constant during the progression of the disease in low-dose patients but increases in high-dose patients. PMID: 20039939

The following clinical paper states that levodopa remains the gold standard of symptomatic efficacy in the drug treatment of Parkinson's disease -"Levodopa in the treatment of Parkinson's disease: an old drug still going strong" ([Clin Interv Aging](#). 2010 Sep 7;5:229-38).

ABSTRACT: "After more than 40 years of clinical use, levodopa (LD) remains the gold standard of symptomatic efficacy in the drug treatment of Parkinson's disease (PD). Compared with other available dopaminergic therapies, dopamine replacement with LD is associated with the greatest improvement in motor function. Long-term treatment with LD is, however, often complicated by the development of various types of motor response oscillations over the day, as well as drug-induced dyskinesias. Motor fluctuations can be improved by the addition of drugs such as entacapone or monoamine oxidase inhibitors, which extend the half-life of levodopa or dopamine, respectively. However, dyskinesia control still represents a major challenge. As a result, many neurologists have become cautious when prescribing therapy with LD. This review summarizes the available evidence regarding the use of LD to treat PD and will also address the issue of LD delivery as a critical factor for the drug's propensity to induce motor complications." PMID: 20852670

With our state of the art compounding lab and pharmaceutical experience, we have the ability to compound levodopa as a transdermal gel.

An example of how you might prescribe follows:

COMPOUNDED MEDICATION

**Levodopa 5%
Transdermal Gel
90ml
Apply 1ml TID**

CHRONIC TENSION TYPE HEADACHE

The following clinical paper states that a level A recommendation is made in favor of using amitriptyline in the treatment of chronic tension-type headache -"Use of amitriptyline for the treatment of chronic tension-type headache. Review of the literature." (Med Oral Patol Oral Cir Bucal. 2008 Sep 1;13(9):E567-72).

ABSTRACT: "Amitriptyline is a tricyclic antidepressant, considered the treatment of choice for different types of chronic pain, including chronic myofascial pain. Its antinociceptive property is independent of its antidepressant effect. Although its analgesic mechanism is not precisely known, it is believed that the serotonin reuptake inhibition in the central nervous system plays a fundamental role in pain control. Although this medication is widely used in the prevention of chronic tension-type headache, few studies have investigated the efficacy of this treatment and the published results are contradictory. The objective of this article was to review the literature published on the use of amitriptyline in the prophylactic treatment of chronic tension-type headache, considering the level of scientific evidence of the different studies using the SORT criteria. From this review, 5 articles of evidence level 1, and another 5 articles of evidence level 2 were selected. Following analysis of the 10 studies, and in function of their scientific quality, a level A recommendation was made in favor of using amitriptyline in the treatment of chronic tension-type headache." PMID: 18758401

This study concludes that gabapentin represents a therapeutic option for chronic daily headache -"Gabapentin in the prophylaxis of chronic daily headache: a randomized, placebo-controlled study" (Neurology. 2003 Dec 23;61(12):1753-9).

ABSTRACT

OBJECTIVE: To compare efficacy and safety of gabapentin (GPT) versus placebo for prophylaxis of chronic daily headache (CDH) (headache at least 15 days/month of greater than 4 hours duration over preceding 6 months).

METHODS: This is a multicenter randomized placebo-controlled crossover study. After 4-week baseline, subjects, aged 18 to 65, were randomized to GPT 2,400 mg/day or placebo. There was 2 weeks titration, 6-week stable dosage, and 1 week washout period between treatment arms. The primary efficacy measure was the difference between the percentage of headache-free days per treatment period. Secondary efficacy measures included headache duration and severity, degree of disability, associated symptoms, concomitant medications, Visual Analogue Scale (VAS) scores, and quality of life (QOL).

RESULTS: A total of 133 patients were enrolled (41 men, 92 women, mean age 43 years). All were eligible for safety analysis. Ninety-five received sufficient treatment to allow evaluation of efficacy. There was a 9.1% difference in headache-free rates favoring GPT over placebo ($p = 0.0005$). Benefits for GPT were also demonstrated for headache-free days/month ($p = 0.0005$), severity ($p = 0.03$), VAS ($p = 0.0006$), headache-associated symptoms of nausea ($p = 0.03$) and photophobia/phonophobia ($p = 0.04$), disability affecting normal activities ($p = 0.02$), attacks requiring bed rest ($p = 0.001$), and QOL related to bodily function ($p = 0.01$), health/vitality ($p = 0.0001$), social function ($p = 0.006$), and health transition ($p = 0.0002$). Reduction in headache days/month was seen across the spectrum of prerandomization headache frequencies.

CONCLUSION: Gabapentin represents a therapeutic option for chronic daily headache. PMID: 14694042 .

This study demonstrates that ketoprofen is an effective alternative to standard therapy in tension type headache -"Ketoprofen (25 mg) in the symptomatic treatment of episodic tension-type headache: double-blind placebo-controlled comparison with acetaminophen (1000 mg)" (Cephalalgia. 1998 Jan;18(1):38-43).

ABSTRACT: "Therapies in current use for episodic tension-type headache (ETTH) are often unsatisfactory. Few trials have been conducted to demonstrate efficacy of any of them. This multicenter placebo-controlled randomized parallel-groups study compared the analgesic efficacy of single oral doses of ketoprofen 25 mg and acetaminophen 1000 mg as outpatient treatment of 1 attack of ETTH. Efficacy was assessed by patients as pain relief on a diary-entered 7-point categorical scale. A total of 457 patients treated 348 attacks, 330 of which were evaluable. There were no serious adverse events (AEs); gastrointestinal AEs were most common on all treatments. Total relief from pain after 2 h was recorded by 16% of patients on placebo, 28% on ketoprofen, and 22% on acetaminophen. Worthwhile effect or total relief (all other responses were regarded as treatment failures) were recorded by 36% on placebo, 70% on ketoprofen ($p < 0.001$), 61% on acetaminophen ($p < 0.001$). The difference between ketoprofen and acetaminophen was not significant ($p = 0.24$). Various secondary efficacy measures confirmed superiority of both active treatments over placebo, with some trends for slightly better outcome on ketoprofen than on acetaminophen. This study demonstrates that ketoprofen is an effective alternative to standard therapy in ETTH." PMID: 9601623

An example of how you might prescribe follows:

COMPOUNDED MEDICATION

**Ketoprofen 10%/Amitriptyline 2%/
Gabapentin 1%
Transdermal Cream
90gm
Apply sparingly to inner neck TID**

We have the ability to compound amitriptyline, gabapentin, and ketoprofen together as one topical cream.

Prescriber Name _____

Prescriber Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Date _____ Patient Name _____ DOB _____

Address _____ City/State/Zip _____ Phone _____

Patient will pick up at pharmacy Please ship to patient

Bill Insurance Plan: _____ ID# _____

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

Chronic Pain

[] Methadone 10mg

Troche

Quantity #60

Directions: Place 1 troche between cheek & gum and let slowly dissolve Q8H

Parkinson's Disease

[] Levodopa 5%

Transdermal Gel

Quantity 90ml

Directions: Apply 1ml TID

Chronic Tension Type Headache

[] Ketoprofen 10%/Amitriptyline 2%/Gabapentin 1%

Transdermal Cream

Quantity 90gm

Directions: Apply sparingly to inner neck TID

Directions

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

