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**Prescription Compounding for General Practice**

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CLOSTRIDIUM DIFFICILE COLITIS

The following study suggests that an oral vancomycin dosage of 125mg three to four times a day may be effective in treating clostridium difficile - "Treatment of antibiotic-associated Clostridium difficile colitis with oral vancomycin: comparison of two dosage regimens" (Am J Med. 1989 Jan;86(1):15-9).

PURPOSE: High-dose (500 mg orally four times daily) vancomycin is considered by many investigators to be the most effective treatment for antibiotic-associated Clostridium difficile colitis. However, a lower dosage of 125 or 150 mg given three or four times a day has become popular, has been shown to be effective, and is less expensive than the high-dose regimen. We therefore decided to compare two vancomycin dosage regimens in a randomized trial.

PATIENTS AND METHODS: The study involved 46 hospitalized patients with serious underlying diseases complicated by C. difficile diarrhea or colitis. Patients were assigned (according to a table of random numbers) to treatment with either 125 or 500 mg of vancomycin orally four times daily for an average of 10 days.

RESULTS: No significant differences in measurable responses to the two regimens were noted. There were no treatment failures. The mean duration of diarrhea after initiation of therapy was about four days, and almost all patients had no diarrhea after one week. The organism continued to be demonstrated in the stools of about 50 percent of patients for the first few weeks after completion of therapy, and nine (20 percent) patients developed a recurrence of their diarrheal illness. Vancomycin was well tolerated by all patients.

CONCLUSION: Since the dose of 125 mg appeared to be as effective as the 500-mg dose, which is more expensive, the 125-mg dose is preferred when vancomycin is used in treatment of this disease, unless the patient is critically ill. PMID: 2910090

With our state of the art compounding lab and pharmaceutical knowledge and experience, we can compound vancomycin into a flavored oral solution; at doses that meet the unique needs of each one of your patients.

Vancomycin 125mg/5ml
Flavored Oral Solution
280ml
5ml QID x 14 days
Fever

Ibuprofen is one of the standard treatments for children with fever. (Int J Clin Pharmacol Ther Toxicol. 1992 Mar;30(3):94-6). A randomized placebo-controlled study assessed the efficacy of ibuprofen liquid in 56 infants and children (age 0.5-12 years) with a baseline rectal temperature greater than or equal to 38.3°C. Ibuprofen liquid was given as a single dose, 5 mg/kg to 18 patients (group I) and 10 mg/kg to 18 patients (group II); placebo was administered to 20 patients (group III). Temperature and vital signs were measured every 0.5-1.0 hours for 8 hours. Multiple blood samples were also collected over this period; ibuprofen plasma concentrations were measured by HPLC. The mean temperature was 38.3°C in group I, 38.1°C in group II, and 38.9°C in group III during 8 hours after drug or placebo administration. The temperature was significantly lower in group I vs III (ibuprofen 5 mg/kg vs placebo) (p < 0.0001). The temperature was also markedly different for patients in group I vs II (ibuprofen 5 mg/kg vs ibuprofen 10 mg/kg) between 4 and 8 hours after the dose (p < 0.01). The duration of action was longer for ibuprofen 10 mg/kg than 5 mg/kg. The mean maximum decrease from baseline temperature was 1.3°C, 1.8°C and 0.8°C for group I, II and III, respectively. The maximum reduction in temperature occurred at 3-4 hours in the ibuprofen groups, and at 7 hours in the placebo group. PMID: 1506123

With our state of the art compounding lab and pharmaceutical experience, we have the ability to compound and custom dose ibuprofen, based on body weight, into a suppository or transdermal gel for those patients who have difficulty swallowing medicine.

COMPOUNDED MEDICATION

Ibuprofen 200mg
Suppository
#24
Insert one suppository rectally Q6-8H PRN

or

Ibuprofen 200mg/ml
Transdermal Gel
30ml
Apply 1ml to neck or inner wrist Q6-8H PRN
NAUSEA & VOMITING

The following posting states that promethazine is an effective agent for the use of PONV -“Prevention and treatment of postoperative nausea and vomiting” (Am J Health Syst Pharm. 2005 Jun 15;62(12):1247-60).

PURPOSE: The physiology, risk factors, and prevention and treatment of postoperative nausea and vomiting (PONV) are discussed.

SUMMARY: Factors to consider when determining a patient’s risk for PONV include sex, history of PONV, history of motion sickness, smoking status, duration of anesthesia, use of opioids, and type of surgery. Receptors that, when activated, can cause nausea or vomiting or both include dopamine type 2, serotonin type 3, histamine type 1, and muscarinic cholinergic type 1 receptors. Patients at moderate to high risk for PONV benefit from the administration of a prophylactic antiemetic agent that blocks one or more of these receptors. Effective agents include transdermal scopolamine, prochlorperazine, promethazine, droperidol, ondansetron, dolasetron, granisetron, and dexamethasone. In high-risk patients, combining two or more antiemetics with different mechanisms of action has been shown to be more effective than using a single agent. In addition to administering a prophylactic antiemetic, it is important to reduce the patient’s risk by considering regional anesthesia, considering inducing and maintaining general anesthesia with propofol, ensuring good intravenous hydration, avoiding hypotension, and providing effective analgesia. If PONV occurs in the immediate postoperative period, it is best treated with an antiemetic agent from a pharmacologic class different from that of the prophylactic agent.

CONCLUSION: Prophylactic antiemetic therapy for PONV is effective, but combinations of agents may be necessary for high-risk patients. Nonpharmacologic strategies are also important.

An example of how you might prescribe follows:

**COMPOUNDED MEDICATION**

| PROMETHAZINE 12.5mg/0.1ml |
| Transdermal Gel |
| 3ml |
| Apply 0.1ml to wrist Q6H PRN |

The following posting states that topical promethazine can be compounded for patients suffering from various causes of nausea.

From Medscape Pharmacists > Pharmacy Practice
Topical Phenergan -Virna Ignacio Almuete, RPh Posted: 08/31/2004

“I have received requests from local physicians to compound Phenergan cream for topical treatment of nausea. Does this product demonstrate an effective therapy for nausea and by what concentration and compounding methodology?”

**Response From the Expert -Virna Ignacio Almuete, RPh**

Promethazine (Phenergan) belongs to the class of antiemetics called phenothiazines. Phenothiazines are effective in the prevention and control of mild-to-moderate nausea and vomiting. Promethazine is available as a tablet, oral liquid, rectal suppository, and intravenous solution. Phenergan cream 2% is a product that is commercially available outside the United States. The only similar topical product available in the United States for the control of nausea and vomiting is the scopolamine patch, which is primarily used for motion sickness.

A recipe for compounding promethazine gel with a final concentration of 12.5 mg/mL is available at the Pharmacy Times Compounding Hotline Web site (see “Suggested Reading”). Topical application of medication is an effective method for drug delivery. However, the amount of medication absorbed through the skin is influenced by skin type, thickness of skin, and the area of application. Absorption can also be influenced by temperature and the addition of occlusive dressing to the area of application.

Cases of intoxication have been reported with topical administration of promethazine. With topical administration, medication is absorbed through the skin and then slowly released from the skin into the general circulation. In the case of overdosage, drug exposure can be prolonged. The benefits of topical administration of promethazine should be weighed against the variability of drug absorption through this route.”

With our state of the art compounding lab and pharmaceutical experience, we have the ability to compound promethazine as a transdermal gel.
**All topical compound %s are per 1 ml or 1 gm unless otherwise noted**

### Clostridium Difficile Colitis

- [ ] Vancomycin 125mg/5ml
  - **Flavored Oral Solution**
  - Quantity 280ml
  - Directions: 5ml QID x 14 days

### Fever

- [ ] Ibuprofen 200mg
  - **Suppository**
  - Quantity #24
  - Directions: Insert 1 suppository rectally Q6-8H PRN

- [ ] Ibuprofen 200mg/ml
  - **Transdermal Gel**
  - Quantity 30ml
  - Directions: Apply 1ml to neck or inner wrist Q6-8H PRN

### Nausea & Vomiting

- [ ] Promethazine 12.5mg/0.1ml
  - **Transdermal Gel**
  - Quantity 3ml
  - Directions: Apply 0.1ml to wrist Q6H PRN

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### Directions

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Prescriber’s Signature_________________________ Refills: 1 2 3 4 5 6 7 8 9 10 11 12 NR