PROVIDENCE Tarzana Medical Center

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PHARMACY AND THERAPEUTICS NEWSLETTER

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http://www.tarzanameded.com/pharmacy/pharmacy.html

PHARMACY AND THERAPEUTICS COMMITTEE ACTIONS

FORMULARY:

Additions:

1. Micafungin (Micamine®) – Antifungal
2. Insulin Pen – All insulin vials with the exception of Regular will be replaced with insulin pen.

Deletions:

1. Meperidine (Demerol®) PCA
2. Promethazine (Phenergan®) 50mg strength. 25mg strength is formulary.

POLICY UPDATE:

Therapeutic Substitution Policy

When Ordered	Substituted With
Ultram ER®, Ryzolt® (tramadol extended release)	**Ultram®** (tramadol immediate release q6hr)
Ambisone®, Amphotec® (amphotericin B Lipid)	**Abelcet®** (Amphotericin B Lipid)
Chromagen Forte, Niferex-150 Forte, etc. (multivitamins + iron & folate)	Ferrous SO4 325mg tid Vitamin C 250mg tid Folic acid 1 mg daily Vitamin B12 100mcg daily
Xopenex® (levalbuterol)	Albuterol racemic
Micro K®, Slow-K® (KCL po)	**KDUR®** (KCL po)
Adalat CC® (nifedipine extended release)	**Procardia XL®** (nifedipine extended release)
Ambien® 10 mg (zolpidem)	**Ambien® 5 mg** (zolpidem) qhs prn MR x 1 in 1 hour if ineffective
Cancidas® (caspofungin), Eraxis® (anidulafungin)	**Micamine®** (micafungin)
Benefiber®,, Konsyl®, Citrocal®	**Metamucil®** (psyllium)

Heparin IV Protocol Policy:

If a physician specifies "Heparin IV per Protocol" with the initial bolus dose and the initial infusion rate different than the protocol, the pharmacist will change the initial doses to the "protocol" dose.

IV Administration Guidelines

- **Promethazine (Phenergan®) IV Administration Guideline**
  - IV Push route is not approved in any areas of the hospital. Preferred route of administration is deep intramuscular injection and subcutaneous injection.
  - Promethazine IVPB route will be limited to OR, CVOR, PACU, and L&D areas only.
  - The maximum IVPB dose will be limited to 25 mg.

  Above actions are in response to ISMP safety alert of reports of gangrene caused from promethazine IV extravasation.
- **Iron Dextran:** A test dose of 25mg IVPB must be administered over 5 – 10 minutes before the first therapeutic dose.
- **Palliative Care Opioid IV Guidelines**
  - The maximum dose limit for the following opioids does not apply to Palliative Care, Hospice, or Terminally Ill patients (P/H/TI).
    - Morphine
    - Hydromorphone
    - Fentanyl
  - Lidocaine Infusion – approved for (P/H/TI) for neuropathic pain not relieved with first line agents.

- Midazolam Infusion – DOU is an added approved area for (P/H/TI) patients on ventilator.

Contrast Policies:

- **IV Contrast Media and Metformin Combination Medication Policy**
  For inpatients, post intravenous contrast media administration, metformin will be held for 48 hours. Upon verification of normal renal function (Serum creatinine less than 1.5) the pharmacist will re-start.
- **Contrast Media Administration Policy**
  Patient's allergy will be reviewed prior to all contrast media administration.

Thrombolytic Therapy for ischemic CVA Policy

The policy has been updated to adhere with the current guidelines. The eligibility checklist will be completed by the physician prior to delivery of alteplace (t-PA). Pharmacy prepares the alteplace (t-PA) bolus and infusion dose.

ADVERSE DRUG REACTIONS

3rd Quarter 2009:

The rate for the 3rd quarter was 3.8% compared to 2.2% of the 2nd quarter. The increase in rate may be due to reviews of "trigger medications" from Pyxis® automated dispensing cabinets. Analgesic and antibiotic continues to be the medication class most frequently associated with ADR.

Severity L2 or greater ADR medications:
L3 Eptifibatide + enoxaparin- thrombocytopenia
L2 **Hydromorphone IV** - unresponsive

MEDICATION UPDATE

Meperidine (Demerol®)

Meperidine is an opioid analgesic in phenylpiperidine group that includes fentanyl. It exerts its analgesic effects by the same mechanism as morphine by acting as an agonist at μ-opioid receptor.

The American Pain Society (APS) and Agency for health Care Policy (AHCPR) & Research recommends that the parenteral **meperidine be used less than 48 hours** in patients with normal renal function who have had a true anaphylactic reaction, a rare occurrence, to other opioids such as morphine or hydromorphone. Rash and itching is a common side-effect of morphine and meperidine due to direct histamine release, an expected pharmacologic action of the medications. This histamine release mediated reaction is different than anaphylactic reaction and is common with opioids. Dilaudid® (hydromorphone) has less histamine release than meperidine or morphine.

Nor-meperidine, a metabolite of meperidine has toxic effect that can cause delirium and seizures. **Nor-meperidine accumulates with high dose, prolonged administration, and decreased excretion in patient with impaired renal function**.

Meperidine can precipitate Serotonin Syndrome (SS) when administered with Monoamine oxidase Inhibitors (MAOI); Selective Serotonin Reuptake Inhibitors (SSRI) like fluoxetine (Prozac®), proxitine (Paxil®), sertraline (Zoloft®), citalopram, (Celexa®), fluvoxamine, (Luvox®), venlafaxine (Effexor®), and Mirtazapine (Remeron® by inhibiting re-update of both 5-HT and norepinephrine reuptake mechanism. Symptoms of Serotonin Syndrome include respiratory depression, hypotension, cyanosis, coma, hypertension, hyperpyrexia, tachycardia, and seizures.

Meperidine half-life is 2 hours, making it unsuitable for the usual 4 hour interval of dosing for pain management. It has toxic effects from the metabolite that accumulates and is not recommended for patients with renal insufficiency (less than 60mL/min).

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