PROVIDENCE
Tarzana
Medical Center

CHAIR PERSON
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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: Micafungin (Micamine®)
Deletions: Caspofungin (Cancidas®)

POLICY UPDATE:

Therapeutic Substitution Policy

When Ordered	Substituted With
Cancidas® (caspofungin) IV	**Micamine®** (micafungin) IV
Benefiber®, Konsyl® Citrucel® and various psyllium products	**Metamucil®** (Psyllium)
Humulin® (insulin regular)	**Novolin®** (insulin regular)
Phenergan® (promethazine) IV or IVPB - Except OR, PACU, L&D, Cath Lab, Prep & hold	**Phenergan® (promethazine) IM**

Heparin IV Protocol Medication Utilization Evaluation (MUE):

The MUE found that the revised protocol of 60 units/kg bolus and 12 unit/kg/hr initial infusion achieved the target goal aPTT in 24 hours faster (93% compared to 80% pre-revision) with less patients exceeding facility upper therapeutic aPTT value of greater than 104 seconds (29% compared to 75% of pre-revision).

Fewer patients were prescribed warfarin on the first day of heparin IV protocol (33% compared to 60% of pre-revision) for those who could take oral medications. Physicians are recommended to initiate warfarin on the first day of heparin or enoxaparin (Lovenox) therapy.

Vancomycin Trough Value Revision

Vancomycin has been in clinical use for nearly 50 years and has been a treatment of choice for MRSA. Due to gradual development of resistant strains and limited permeability of vancomycin into certain tissues, current guidelines published by the Infectious Diseases Society of America (IDSA), and the American Society of Health System Pharmacists (ASHP) recommend targeting higher trough values for specific indications[1].

A target **trough value of 15-20 mcg/ml** is recommended for indications such as: (1) pneumonia, (2) meningitis, (3) endocarditis, (4) osteomyelitis, and (5) bacteremia. Trough values of 10-15 mcg/ml may be sufficient for other indications. These higher trough values for these indications have been shown to have a **better clinical outcome and less emergence of resistance**[2, 3].

Nephrotoxicity associated with vancomycin monotherapy is rare (<1%) but that risk is approximately 3 – 4 times higher when used concurrently with aminoglycosides. There is no direct correlation between higher trough values (of 15-20 mcg/ml) and nephrotoxicity, however, it is noted that higher trough values are recorded in patients who develop renal insufficiency since vancomycin is eliminated via glomerular filtration[5].

REFERENCES

1. Rybak M, Lomaestro B, et al. AJHP 2009. 66;82-98
2. Howden BP, et al. Clin Infect Dis. 2004; 38:521-8.
3. Sakoulas G J Clin Microbiol. 2004; 42:2398-402.
4. Zimmermann et al Pharmacotherapy.1995;15:85-91.

ADVERSE DRUG REACTIONS

76 year old female was started on Sotalol 80mg bid for a-fib and rapid ventricular rate. (Baseline Scr = 1.41; CrCl = 36). The patient came to the ED with bradycardia (HR = 20; QTC = 486), episodes of presyncope, diaphoresis, and renal insufficiency (Scr = 2.71; CrCl = 17). Sotalol was put on hold and the patient was admitted inpatient for three days to be treated for her symptoms.
The manufacturer recommends that in order to minimize the risk of induced arrhythmia, patients initiated or re-initiated sotalol should be placed for a minimum of three days in a hospital.

4th Quarter 2009 ADR Report:
The rate for the 4th quarter was 3.5% compared to 3.8% of the 3rd quarter. Analgesics and antibiotics continue to be the medication classes most frequently associated with ADR.

Severity L2 or greater ADR medications:
L2 enoxaparin and warfarin - severe epistaxis
L2 **linezolid IV** – thrombocytopenia
L2 enalapril – bronchospasm & swelling

MEDICATION UPDATE

Morphine Epidural in Cesarean Delivery:
Observation studies report that the frequency of respiratory depression ranges from 0.08% to 3% when single-injection epidural morphine are administered. [1] The studies also report that doses larger of 3.75mg did not further increase analgesia.[2] For cesarean delivery, intrathecal doses of morphine greater than 100 – 200 mcg and epidural doses greater than 2 – 4 mg are unnecessary.[3]
It is recommended that initial **dose of epidural morphine be less than 4 mg** for patients undergoing cesarean delivery.

1. Horlocker TT et al. Anesthe 2009;110:218-230
2. Palmer CM et al. Anesth Analg 2000;90:887-91
3. Carvalho B. anesth Analg 2008; 107-956-61

Antimicrobial Stewardship Report
The program has observed increased changes of antibiotic based on culture and sensitivity results and de-escalation of antibiotic selection.
The duplicate therapy the program has intervened the most is concomitant prescribing of intravenous Zosyn® (piperacillin/tazobactam) and Flagyl® (metronidazole). Pip/tazo and metronidazole both have an excellent anaerobic coverage and the **prescribing both of the antibiotics is unnecessary** unless the patient is NPO and has *c. difficile* diarrhea.

INSTITUTE for SAFE MEDICATION PRACTICES (ISMP) UPDATE:

Is the figure below Provera, Prozac, or Proscar?

An order was written for Provera (medroxy**PROGESTER**one) 10 mg po daily. Pharmacist misinterpreted the order as **PROZAC** (**FLU**oxetine) 10 mg po daily. The nurse did not detect the error when verifying in the medication administration record.

The patient received one dose of Prozac. The physician discovered the error the next day while he was reviewing the patient's medication list (which is a highly recommended form of redundancy that has detected many errors). *The handwritten order was shown to several nurses, pharmacists, and physicians and some interpreted the order as Prozac, Provera or **PROSCAR.***

Poor handwriting was a contributing factor, as was the fact that Provera is infrequently prescribed while Prozac is a commonly prescribed drug, perhaps biasing the reader's interpretation as "Prozac" on the handwritten prescription.

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