**Unit Exam 2 Review**

Med calculation - drop factor, po med, IV pain medication

**Blood administration:**

**What IV fluid?** Normal Saline 0.9%NaCl

**What should the nurse assess prior to giving?** Review agency policy and procedures, verify order and indication for BT, assess baseline vitals and medical history.

**What do you do if patient has an elevated temperature?** Speak with PCP

**How do you treat a possible reaction?** Stop infusion, replace tubing, notify PCP

**How would you instruct a patient to take Guaifenesin, Diphenhydramine?**

\*Avoid alcohol, narcotics, barbiturates, and hypnotics

\*don’t drive b/c it makes you drowsy

\*PO, IM and IV.

\*Should not be used in patients with narrow angle glaucoma

**Adverse effects of cromolyn Sodium inhaler (asthma)**

Rebound bronchospasm. Headache, cough, hoarseness, nausea, diarrhea, palpitations, tachycardia, and myalgia

**Terbutaline should be used with caution in patients with what condition?**

Hypokalemia. May cause nervousness, tremors, dizziness, drowsiness, headache, hyperhidrosis, nausea, vomiting, hyperglycemia, hypokalemia, dyspnea. Uses: asthma, COPD, bronchospasm,

**Zafirlukast and Isoniazid what laboratory test should be done prior to administration**

Treats persistent and chronic asthma. Lab: ALT, AST

**Patient education**

Isoniazid (antituberculars)

Ethambutol (antituberculars)

Antiviral

Omalizumab (antiasthmatics)

Warfarin (anticoagulant)

Rifampin (antituberculars)

**Theophylline what foods should be limited (bronchodilator)**

Avoid caffeinated products such as coffee, tea, soda, and chocolate. Increase fluid intake.

**Digoxin therapeutic range**

0.8 – 2 mg/mL

**Procainamide toxicity how do you treat? (antiarrhythmic)**

\*Slows conduction and prolongs repolarization

**Adverse effects**

Propranolol (antianginal): may cause agitation, drowsiness, dizziness, visual impairment, bradycardia, cool extremities, erectile dysfunction, and bronchospasm.

\*Beta-Adrenergic Blocker – nonselective: decreases HR and can cause bronchoconstriction

**Hydrochlorothiazide (antihypertensive)**

\*Orthostatic hypertension, hyponatremia, hypomagnesemia, hypochloremia, hyperglycemia, hypercalcemia, hyperuricemia, hypercholesterolemia, hypertriglyceridemia, metabolic acidosis, pulmonary edema, ocular hypertension.

**Priority nursing intervention for Alteplase (thrombolytic)**

Administer within 3-4 hours from onset or 30 minutes from arrival to hospital for treatment.

**Side effects of Cholestyramine (lipid lowering agent)**

\*Binds with bile acids in the intestine and reduces LDL.

\*Side effects: anorexia, nausea, vomiting, diarrhea, constipation, steatorrhea, abdominal pain, edema, neuralgia, osteoporosis, peptic ulcer, folate deficiency, and GI bleeding or obstruction.

**Bumetanide expected outcome (loop diuretic)**

\*Used for edema and heart failure.

\*Extreme loss of water and sodium.

\*Increase renal blood flow up to 40%

**Heparin antidote**

Protamine Sulfate

**Priority nursing action for anaphylactic reactions**

Airway

**Patient education Nicotinic acid and NSAIDS**

**Spironolactone – monitor for which electrolyte abnormality (potassium sparing diuretic)**

hyperkalemia

**Verapamil mode of action (cardio – antianginal - CCB)**

\*Absorbed through the GI mucosa

\*Treats stable and variant angina, certain dysrhythmias, and hypertension

\*CCB’s relax coronary artery spasm, relax peripheral arterioles all of which decreases oxygen demand.

**What electrolytes need to be monitored to prevent digitalis toxicity**

potassium

**Mode of action**

**Digoxin (antiarrhythmic)**

\*Decreases conduction through AV node causing HR to decrease

\*Increase myocardial contraction which increases cardiac output and improves circulation and tissue perfusion.

**Tiotropium (bronchodilator)**

\*Anticholinergic drug used for maintenance treatment of bronchospasms associated with COPD.

\*Blocks muscarinic cholinergic receptors and antagonizes acetylcholine action by inhibiting M3 receptor response to acetylcholine, thereby relaxing smooth muscle of bronchi; dilates bronchi.

**Albuterol - when do you use**

Effective for treatment and control of asthma by causing bronchodilation

**First line diuretic for heart failure**

Loop diuretic

**What condition should the nurse be concerned with before starting a Thiazide diuretic**

Hypercalcemia, hyperglycemia

**Priority nursing action ACE inhibitor hypersensitivity reaction**

Angioedema: swelling of the face, tongue, lips, mucous membranes, and larynx

\*Discontinue drug.

\*For laryngeal edema patient may require rescue epinephrine.

**Patient education Nitroglycerin patch**

\*Cause vasodilation which causes increased blood flow to the coronary arteries

\*May experience dizziness, faintness, or headache

\*Patch should be removed nightly to allow for 8 – 12 hour nitrate free interval.

-May have headache, rotate sites,

**Interaction of Furosemide (loop diuretic) and a steroid drug what would the nurse recommend?**

Increased potassium loss when Furosemide is taken with steroids. Potassium supplementation. Monitor serum potassium levels closely.

**Patient education Montelukast sodium (allergy, cold, and cough)**

\*Bronchodilator

\*Treats allergic rhinitis and asthma.

\*Inhibits smooth muscle contraction and bronchoconstriction

\*Patient teaching: monitor pulse, avoid smoking, discuss ways to alleviate anxiety, wear medical alert bracelet.

**Patient taking warfarin what laboratory test should be done**

PT, INR should be 2-3 to prevent DVT and 2.5-3.5 to prevent arterial thrombosis

Heparin: monitor aPTT 25 – 35 seconds.

**Inhaled Albuterol mode of action**

Causes bronchodilation by blocking cholinergic receptors in bronchial smooth muscle

**What test is done to differentiate dyspnea due to lung or dyspnea from heart failure?**

An elevated BNP helps differentiate between dyspnea due to lung dysfunction vs heart failure.

**Normal INR range and how do you treat if elevated**

Normal INR is 1.3-2

Patients on warfarin therapy 2-3 to prevent DVT and 2.5-3.5 to prevent arterial thrombosis. Anticoagulant dose may need to be reduced.

**Chapter 35 – Upper respiratory disorders**

1. Common cold – treatment includes antihistamines (block H1 receptors), decongestants, antitussives, and expectorants. Symptoms: rhinorrhea (watery nasal discharge), nasal congestion, cough, increased mucous secretions.
2. Acute rhinitis – acute inflammation of the mucous membranes of the nose.
3. Sinusitis – inflammation of the mucous membranes of one or more of the maxillary, frontal, ethmoid, or sphenoid sinuses.
4. Acute pharyngitis – sore throat

**Chapter 36 – Lower respiratory disorders**

COPD – Chronic obstructive pulmonary disease: caused by airway obstruction with increased airway resistance of airflow to ling tissues. Caused by chronic bronchitis, bronchiectasis, emphysema, and asthma

**Asthma**: inflammatory disorder of the airway walls associated with a varying amount of airway obstruction. Minimal to no changes in the structure and function of lung.

\*Triggered by stress, allergens, and pollution

**Bronchial Asthma**: characterized by bronchospasm, wheezing, mucous secretions, and dyspnea.

**Chronic bronchitis:** caused by smoking or frequent lung infections. Bronchial inflammation and excessive mucous secretion.

**Emphysema**: caused by smoking or atmospheric contaminants.

**Chapter 37: Cardiac glycosides, antianginals, and antidysrhythmic**

Digoxin

\*Antidote: digoxin immune fab

\*Therapeutic range 0.8 – 2 ng/mL

S/s of digitalis toxicity: anorexia, diarrhea, nausea, vomiting, bradycardia, premature ventricular contraction, cardiac dysrhythmias, headaches, malaise, blurred vision, visual illusions (white, green, or yellow halos around objects), confusion and delirium.

-P wave: atrial activation

-QRS: ventricular depolarization – contraction

-T wave: ventricular repolarization – rest

-PR interval: av conduction

-QT interval: ventricular action potential duration

**Chapter 38**

**Diuretics that remove sodium and water**

1. Thiazide diuretics – promote sodium, chloride, and water excretion. Treats hypertension and peripheral edema. Used for patients with normal renal function. Promotes loss of sodium, potassium, and magnesium. Calcium reabsorption. May cause hyperglycemia.
2. Loop – inhibit chloride transport of Na+ and reabsorption of Na+. Na+, K+, Ca+, Mg+ are lost. Affects blood glucose and increase uric acid levels. Greatly deplete Na+ and electrolytes. May increase renal blood flow up to 40%. Can be paired with thiazide if loop isn’t enough fluid. Excretes calcium. Highly protein bound. Major drug interaction with digoxin. Potassium supplementation if taking both.
3. Osmotic – used to decrease intercranial and intraocular pressure. Excretes Na+, K+, Cl-, and water. Use with caution in patients with heart failure and heart disease.
4. Carbonic anhydrase inhibitors
5. Potassium sparing – sodium and water excretion with potassium retention.

Thiazide, loop, and K+ sparing are most frequently prescribed for edema associated with HF and hypertension.

**Chapter 40**

Thrombus: stationary clot

Embolus: moving clot

-thrombolytics: dissolve clots

-anticoagulants: prevent clots from forming.

Heparin is used when thrombosis occurs from DVT, PE, and evolving stroke.

\*Antidote: protamine sulfate

\*Start Warfarin before discontinuing Heparin.

-Blood clots disintegrate within 1-2 weeks naturally.

-Thrombolytic agents should be administer within 3-4 hours of onset or within 30 minutes of arrival to the hospital.

**Chapter 41 – Antihyperlipidemics and Drugs to Improve Peripheral Blood Flow**

**Lipoproteins**

\*High density lipoproteins (HDL): removes cholesterol from the bloodstream. Greater than 60 mg/dL

\*Low density lipoprotein (LDL): 50-60% cholesterol. Less than 100 mg/dL

\*Very low-density lipoprotein (VLDL): mostly triglycerides

\*Cholesterol: 150-200mg/dL

**Antihyperlipidemics:** Statins, bile acid, fibric acid, nicotinic acid, cholesterol absorption inhibitors.

**Statins** inhibits cholesterol production in the liver.