**PHARMACOLOGY STUDY GUIDE MODULE 3**

**Neuromuscular and Peripheral Nervous System Drugs**

**Ch. 23 – Adrenergic Drugs (sympathomimetic drugs)**

1. What are the actions of these drugs on the B/P, Heart rate, Bronchi, Pupils, and GI system? relaxation of the smooth muscles of the bronchi, constriction of blood vessels and sphincters of the stomach, dilation of coronary blood vessels, decrease in gastric motility, increased heart rate,

2. What are some of the main uses of these drugs?

* Hypovolemic and septic shock
* Moderate to severe episodes of hypotension
* Control of superficial bleeding during surgical and dental procedures of the mouth, nose, throat, and skin
* Cardiac decompensation and arrest
* Allergic reactions (anaphylactic shock, angioneurotic edema)
* Temporary treatment of heart block
* Ventricular arrhythmias (under certain conditions)
* Respiratory distress (as bronchodilators)
* Nasal congestion and glaucoma (topical formulation)

3. What are the 2 main neurotransmitters of the sympathetic nervous system? Norepinephrine & epinephrine

4. List the main adverse reactions to the adrenergic drugs.

* Cardiac arrhythmias (bradycardia or tachycardia)
* Headache
* Nausea and vomiting
* Increased blood pressure (which may reach dangerously high levels)

5. Why are older adults especially vulnerable to adverse reactions of these drugs? older adults are more likely to have preexisting cardiovascular disease that predisposes them to potentially serious cardiac arrhythmias.

6. What are some signs and symptoms of shock? What pulse rate would you report? What B/P

reading would you report? SBP < 100 || ↓ > 20 of norm. BP > 100. in the early stages of shock, the extremities may be warm because vasodilation is initiated and blood flow to the skin and extremities is maintained. If the condition is untreated, blood flow to the vital organs, skin, and extremities is compromised and the client becomes cool and clammy. Regardless of the type, shock results in a decrease in cardiac output, decrease in arterial blood pressure (hypotension), reabsorption of water by the kidneys (causing a decrease in urinary output), decrease in the exchange of oxygen and carbon dioxide in the lungs, increase in carbon dioxide and decrease in oxygen in the blood, hypoxia (decreased oxygen reaching the cells), and increased concentration of intravascular fluid.

7. What are some important points to remember when dopamine and norepinephrine are given

IV as vasopressors? Frequent adjustments depending on vital signs and frequently check for leakage

8. What are some teaching points to include when educating patients on the use of an EpiPen for

a severe allergic reaction? Carry it with you at all times. Recognize systems and how to inject.

9. What side effects would you tell a patient they might experience after using an EpiPen? reactions: faster heartbeat, nausea, vomiting, sweating, dizziness, weakness, headache, and nervousness.

10.What are some nursing interventions to help with disturbed sleep pattern when a patient is in

ICU and taking an adrenergic drug? Dim lights, no caffeine, cluster care to minimize interruptions

*Specific Medications to focus on:*

* Dobutamine
* Dopamine
* Midodrine
* norepinephrin

**Ch. 24 – Adrenergic Blocking Drugs (sympatholytic drugs)**

1. What are the actions of these drugs on the B/P, Heart rate, Bronchi, Pupils, and GI system?

2. What are some of the main uses of these drugs?

3. List the main adverse reactions to the adrenergic blocking drugs.

4. What are some contraindications to these drugs? (Who would they not be given to?)

5. What vital sign parameters (pulse and blood pressure) would call for withholding an adrenergic

drug and notifying the PHCP?

6. What are some teaching points for a patient who has orthostatic or postural hypotension?

7. What can the nurse teach the patient in order to minimize the effects of adrenergic blocking

drugs?

8. What are some important things to cover when teaching a patient how to take their blood

pressure at home?

*Specific Medications to focus on:*

* Atenolol
* Metoprolol
* Propranolol
* Timolol
* Carvedilol
* Labetalol
* Clonidine
* Guanfacine
* Methyldopa
* Tamsulosin
* Terazosin

**Ch. 25 – Cholinergic Drugs (parasympathomimetic drugs)**

1. What are the actions of these drugs on the B/P, Heart rate, Bronchi, Pupils, and GI system?

2. What are some of the main uses of these drugs?

3. What are the 2 main neurotransmitters of the parasympathetic nervous system?

4. List the main adverse reactions to these cholinergic drugs.

5. What are some contraindications to these drugs? (Who would they not be given to?)

6. What are S&S of cholinergic crisis (AKA cholinergic toxicity)? HINT: SLUD

7. What are S&S of over dosage with a cholinergic drug in a patient with myasthenia gravis?

8. What are S&S of under dosage with a cholinergic drug in a patient with myasthenia gravis?

9. What is the difference between direct acting and indirect acting cholinergic drugs?

*Specific Medications to focus on:*

* Atropine
* Bethanechol
* Guanidine
* pyridostigmine

**Ch. 26 – Cholinergic Blocking Drugs (parasympatholytic drugs)**

1. What are the actions of these drugs on the B/P, Heart rate, Bronchi, Pupils, and GI system?

2. What are some of the main uses of these drugs?

3. List the main adverse reactions to these cholinergic blocking drugs.

4. What are some contraindications to these drugs? (Who would they not be given to?)

5. Why must these drugs be used cautiously in older adults?

6. What can you teach a patient to help with dry mouth (xerostomia)?

7. Why do these drugs increase a patient’s risk for falls? What can you do to prevent falls?

8. What can you teach a patient regarding heat prostration? What age group is most at risk?

9. What can you encourage a patient to do to treat constipation?

*Specific Medications to focus on:*

* Atropine
* Dicyclomine
* Scopolamine
* Oxybutynin
* Tolterodine
* ipratropium

**Ch. 29 – Skeletal Muscle, Bone and Joint Disorder Drugs**

*Disease-Modifying Anti-rheumatic Drugs (DMARDs)*

1. What is the main use of these drugs?

2. What is their main action?

3. Who should not receive one of these drugs?

4. What are the main side effects?

5. Why would these drugs increase a patient’s risk for infection? What are some S&S of

infection?

6. What can the nurse do to prevent infection in these patients?

7. What lab tests should be monitored in a patient taking a DMARD?

8. What patient education should be given?

*Bisphosphonates*

1. What is the main use for the bisphosphonates?

2. What is the most important adverse reaction that relates to the GI system?

3. What is the most important patient education to give relating to taking one of these drugs?

4. What lab test should be monitored?

*Skeletal Muscle Relaxants*

1. What is the use for the skeletal muscle relaxants?

2. What is the main adverse reaction that relates to the central nervous system?

3. Why should these drugs not be given with other CNS depressants, including alcohol?

4. What are some key teaching points to cover concerning these drugs?

*Uric Acid Inhibitors*

1. What is the main use of the uric acid inhibitors?

2. What is the most serious adverse reaction of allopurinol?

3. What is the most serious adverse reaction of colchicine?

4. What is the most important thing to teach a patient regarding their intake and why?

5. What should a patient who is taking allopurinol know about a possible skin rash?

*Specific Medications to focus on:*

* baclofen
* cyclobenzaprine
* diazepam
* metaxalone
* tizanidine
* Methotrexate
* Sulfasalazine
* Adalimumab
* Etanercept
* Alendronate
* Allopurinol
* colchicine