**Exam 1 Review**

**Signs and symptoms of myxedema**

\* Severe form of hypothyroidism.

**S/s:** lethargy, apathy, memory impairment, emotional changes, slow speech, deep course throat, edema of eyelids and face, dry skin, cold intolerance, slow pulse, constipation, gain, and abnormal menses.

**Treatment:** drugs containing T3 and T4. Calcitonin for elevated calcium levels.

**Medication used to treat a child with acromegaly that cannot be destroyed by radiation**

Acromegaly is caused by hypersecretion of growth hormone after puberty.

**Treatment**: ocreotide (Sandostatin), lancreotide.

**Which vitamin enhances the absorption of calcium?**

The parathyroid gland releases PTH which regulates calcium levels.

1. Enhances release of calcium from bones.
2. Enhances calcium absorption from renal tubules
3. Increases production of vit D which enhances calcium absorption in the intestines.

**Over the counter medications a part of patient’s medication list?**

Yes

**Patient education on enteric coated medication**

Don’t crush

**What is a drug interaction? Generic name of a drug**

**Drug interaction**: Altered or modified action or effect of a drug as a result of interaction with one or multiple drugs.

**Generic name:** official, nonproprietary name for a drug. Universally accepted. 80% of drugs are ordered using generic name. Always use lower case letters.

**Effects of coumadin with a high protein bound medication**

When two highly protein-bound drugs are administered together they compete for protein binding sites. This may cause one drug to be displaced since it can’t bind to a protein site causing more free drug in the system which can lead to toxicity.

**Fast acting/ regular insulin should be administered how many minutes before meal**

**Rapid / Fasting Acting:** administered 5 – 10 minutes before meal

**Regular:** 30 – 60 minutes before meal

**Adrenal cortical insufficiency and glucocorticoid medications**

**Addison’s Disease** – adrenal insufficiency

 S/s: nausea, vomiting, lethargy, confusion, coma, hypoglycemia, weight loss, muscle weakness, irritability, tachycardia, hypotension, diarrhea, hypovolemia, hyponatremia, hyperkalemia

**Glucocorticoids** are the most potent natural cortisol produced by the body. Cortisone drugs.

**Category II medications**

High potential for abuse that may lead to severe psychological or physical dependence.

Examples of Schedule II narcotics include: hydromorphone (Dilaudid®), methadone (Dolophine®), meperidine (Demerol®), oxycodone (OxyContin®, Percocet®), and fentanyl (Sublimaze®, Duragesic®). Other Schedule II narcotics include: morphine, opium, codeine, and hydrocodone.

**Names, category, and mode of administration for insulin**

**Signs and symptoms of hypoglycemia and treatment**

**Hypoglycemia:** insulin overdose, exercise, skipping a meal

 S/s: tachycardia, confusion, sweating, drowsiness, convulsions, coma, death

 Treatment: 4 oz fruit juice, glucagon or D50W if unconscious

**Hyperglycemia:** under dose of insulin, fasting glucose greater than 126 mg/dL

 S/s: 3 p’s, glucosuria, weight loss, fatigue, weakness, headache, hunger, tachycardia,

**Alpha adrenergic blockers mechanism of action and conditions used to treat**

\*Promote vasodilation causing a decrease in blood pressure.

\*Treat peripheral vascular disease

\*Decrease symptoms of benign prostatic hyperplasia.

\*Blocking the alpha1 causes vasodilation which decreases resistance to blood flow which lowers BP. (Labetalol)

 -should not be taken by asthmatics because large amounts block beta 2 which may increase airway resistance

\*Alpha blockers are safe for patients with diabetes because they do not affect glucose metabolism or respiratory function.

**Importance of spacer for inhaled corticosteroid medication**

\*Enhance delivery of medications from a metered dose inhaler.

**Patient education Glucocorticoid medication given with insulin**

\*Gluccocorticoids increase blood glucose. Insulin dose may need to be increased.

**Anticholinergic common drugs and uses**

\*Anticholinergic agents compete with ACTH on muscarinic receptor sites. Inhibits ACTH.

\*Clinical uses: treat Parkinson’s disease, arrhythmia, asthma, motion sickness, pre anesthetic agent, reduces GI motility.

\*Drugs: atropine (Atropen), benzotropine (Cogentin), scopolamine (Transderm-Scop), diclyclomine (Bentyl), tolterodine (Detrol), ipratropium (Atrovent)

**Thyroid medication interaction with oral anticoagulants and digoxin**

\*Decrease the effect of digoxin.

\*Increases the effects of oral anticoagulants.

\*Decrease effect of insulin and oral antidiabetics.

**Beta blockers side effects, mechanism of action, and patient education**

\*Decrease HR, and a decrease in blood pressure usually follows.

\*Treat glaucoma

\*Decrease IOP by decreasing production of aqueous humor.

 Side effects: eye discomfort, miosis, vision problems at night, slow HR which can worsen bradycardia, AV heart block, and heart failure.

**Beta 2 agonists patient education, side effects**

\*Treatment of COPD and premature contractions.

Side effects: anxiety, insomnia, palpitations, tachycardia, hypokalemia, muscle cramps, sweating, tremors.

**Anticholinergic medications should be avoided with what conditions / mechanism of action, how do you treat dry mouth**

\*Competes with ACTH on muscarinic receptor sites. Inhibits ACTH.

 Increases HR, cardiac output, decreased salivation, dry mucous membranes, relaxation of smooth muscles, decreased GI activity, dilation of pupils, antispasmodic activity.

\*Treatment of dry mouth: cevimeline (Evoxac)

**Patient education for bethanechol (cholinergic), side effects**

\*Side effects: dizziness, lightheadedness, nausea, vomiting, abdominal cramps / pain, diarrhea, headache

\*Patient teaching: take med as instructed, change positions slowly, report abdominal discomfort, salivation, sweating, or flushing.

**Should a diabetic take Sudafed for nasal congestion?**

\*No, it increases blood glucose levels. According to book - Use with caution.

**Which cholinesterase inhibitor is used to treat Alzheimer’s?**

Reversable cholinesterase inhibitor. Donepezil or Tacrine.

**How do you monitor kidney function?**

eGFR – estimate glomerular filtration rate: measures creatine in the blood.

**Indirect cholinergic agonist drug mechanism of action**

Inhibit or inactivate the enzyme cholinesterase.

How do you administer a schedule II injectable drug?

Drug interaction between theophylline and cimetidine

**Antidote for dopamine**

Phentolamine

**Signs and symptoms of a thyroid crisis**

Fever, diarrhea, vomiting, nausea, abdominal pain, nervousness, confusion, anxiety. If left untreated coma.

**Drug that is used to differentiate primary and secondary hypothyroidism**

Primary cause: thyroid gland disorder

 -decreased T4

 -elevated TSH

\*Treat with Levothyroxine Sodium

Secondary cause: lack of TSH secretion (pituitary disorder)

**Patient that has asthma is given a selective beta 2 adrenergic agonist what side effect would you expect?**

Tremors, headache, nervousness, tachycardia, palpitations, dizziness, dysrhythmia, nausea, vomiting, and urinary retention.

**Cholinesterase inhibitors are contraindicated for what conditions?**

Patients with intestinal or urinary obstruction.

**Side effects of adrenergic agonists**

Hypertension, tachycardia, palpitations, restlessness, tremors, dysrhythmia, dizziness, urinary retention, nausea, vomiting, dyspnea, and pulmonary edema.

Alpha 2 drugs used mainly for hypertension

Beta 1 heart

Beta 2 lungs