ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Enoxaparin - Lovenox REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic - Low molecular-weight heparin
Therapeutic - anticoagulant

PURPOSE OF MEDICATION

Expected Pharmacological Action

Immediate onset of action when given intravenous form. It binds to and increases the power of antithrombin III (a serine protease inhibitor) to form a complex that irreversibly inactivates factor Xa.

Therapeutic Use

To prevent deep vein thrombosis (DVT) after hip or knee replacement and for continued prophylaxis after hospitalization for hip replacement

Complications

Atrial fibrillation, CVA, congestive heart failure, thrombosis, cholestatic and hepatocellular liver injury, hematemesis, melena, hemorrhage, HIT or immune mediated thrombocytopenia, purpura, pulmonary edema or embolism, anaphylaxis including shock; hyperkalemia

Medication Administration

Subcutaneous injection
- 30mg every 12 hours up to 14 days
- 40mg daily lasting 7 to 10 days
- 40mg daily up to 14 days
- 1mg every 12 hr with 100-325mg of aspirin daily for 2-8 days

IV injection
- 30mg single dose

Contraindications/Precautions

Active major bleeding; history of heparin-induced thrombocytopenia; hypersensitivity to benzyl alcohol, enoxaparin, heparin, pork products or their components

Nursing Interventions

- Do not eject air bubble prior to injection
- Do not aspirate or massage site
- Monitor for signs of bleeding
- Administer in subcutaneous tissue

Interactions

NSAIDs; oral anticoagulants; platelet aggregation inhibitors; thrombolytics, possibly increased risk of bleeding and of spinal or epidural hematoma

Client Education

- Instruct patient to safe handling and disposal of syringes & needles
- Caution patient not to rub the site post injection
- Advise patient of adverse effects and when to seek medical attention

Evaluation of Medication Effectiveness

- Assess for absence or reduction of signs and symptoms of thrombotic disorders.
- Assess for signs of deep vein thrombosis (DVT)

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Clopidogrel - Plavix REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic class - $P2Y_{12}$ platelet inhibitor
Therapeutic class - Platelet aggregation inhibitor

PURPOSE OF MEDICATION

Expected Pharmacological Action

Binds to adenosine diphosphate (ADP) receptors on the surface of activated platelets. This blocks ADP which deactivates glycoprotein receptors and prevents fibrinogen from attaching to receptors

Therapeutic Use

Reduce thrombotic events such as stroke and myocardial infarction

Complications

Fatal intracranial bleeding, hypotension, acute liver failure, gastrointestinal and retroperitoneal hemorrhage, noninfectious hepatitis, pancreatitis, glomerulopathy, aplastic anemia, neutropenia, unusual bleeding, bronchospasm

Medication Administration

PO tablets

Loading dose 300mg as a single dose

Maintenance dose 75mg daily

Contraindications/Precautions

Active pathological bleeding, including peptic ulcer and intracranial hemorrhage.

Hypersensitivity to clopidogrel or its components

Nursing Interventions

- Take without regard to food
- Monitor patient for signs/symptoms of bleeding
- Monitor patient for fever, renal dysfunction, neuro symptoms, low platel coun

Interactions

Aspirin - increased risk of bleeding

NSAIDs - increased risk of GI bleeding

Opioids - delayed & reduced absorption of clopidogrel

Client Education

- Discourage use of NSAIDs
- caution bleeding may continue longer than usual
- Do Not stop medication abruptly
- Inform all medical staff on being on this med prior to procedure

Evaluation of Medication Effectiveness

Nurse assess for absence of vascular ischemic events

Ensure hemoglobin and hematocrit levels within normal limits.

ACTIVE LEARNING TEMPLATE: *Medication*

STUDENT NAME Ashley Webber

MEDICATION Epoetin Alfa - Epogen, Eprex, Procrit REVIEW MODULE CHAPTER 11

CATEGORY CLASS Pharmacologic class - Erythropoietin
Therapeutic class - Antianemic

PURPOSE OF MEDICATION

Expected Pharmacological Action

Stimulates release of reticulocytes from the bone marrow into bloodstream, where they develop into mature RBCs

Therapeutic Use

Treatment of anemia from renal failure

Complications

CVA, seizures, congestive heart failure, deep vein thrombosis, MI, pulmonary congestion, stevens-Johnson syndrome, hyperkalemia

Medication Administration

IV or subcutaneous injection

Initial IV 50-100 units 3x week

SQ initial 150 units 3x week

Contraindications/Precautions

hypersensitivity to human albumin or products made from mammal cells or their components

uncontrolled hypertension

Nursing Interventions

- Monitor patient for hypertensive or thrombotic complications
- Monitor patient throughout therapy for skin reactions

Interactions

None reported

Client Education

- Teach patient how to administer drug and dispose of needles
- Encourage patient to eat iron rich foods
- Emphasize importance of complying with dosage regimen and keep all follow-up appointments.

Evaluation of Medication Effectiveness

Nurse watches for increased RBCs, hemoglobin, and hematocrit

Increased energy and exercise capacity

Improved quality of life

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Infliximab - Remicade REVIEW MODULE CHAPTER 13

CATEGORY CLASS Pharmacologic class - Monoclonal antibody
Therapeutic class - anti-inflammatory

PURPOSE OF MEDICATION

Expected Pharmacological Action

Binds with cytokine tumor necrosis factor-alpha, preventing it from binding with its receptors. Infiltration of inflammatory cells into inflamed intestine and joints declines

Therapeutic Use

To control moderate to severe Crohn's disease long term

Complications

CVA, meningitis, seizures, arrhythmias, bradycardia, hypotension, MI, pericardial effusion, acute hepatic failure, hepatotoxicity, melena, renal failure, pulmonary edema, severe bronchospasm, anaphylaxis

Medication Administration

IV - initial 5mg/kg over 2 hrs

Maintenance 3-5mg/kg over 2 hrs every 8 weeks

Contraindications/Precautions

- Doses greater than 5mg/kg in patients with moderate to severe heart failure
- hypersensitivity to infliximab, murine proteins, or their components

Nursing Interventions

- Do not start in patient with an active infection
- use cautiously in elder patients
- Reaction could occur 2 hrs to 12 days after infusion

Interactions

- abatacept, anakinra, etanercept, tocilizumab: increased risk of neutropenia and serious infections
- live vaccines, therapeutic infectous agents: increased risk of adverse vaccine effects

Client Education

- Med should take effect within 1-2 weeks
- Seek medical attention if evidence of infection (cough, sore throat, headache)
- Advise not to recieve vaccinations using live vaccines

Evaluation of Medication Effectiveness

After organ transplant the absence of signs and symptoms of a rejection reaction is evidence of therapeutic effects of mycophenolate immunosuppressive therapy

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Warfarin - Coumadin REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic class - Coumarin derivative
Therapeutic class - anticoagulant

PURPOSE OF MEDICATION

Expected Pharmacological Action

Interferes with the liver's ability to synthesize vitamin K-dependent clotting factors, depleting clotting factors II, VII, IX, & X thus preventing coagulation

Therapeutic Use

prevent or treat pulmonary embolism, recurrent MI, thromboembolic complications from A-fib, heart valve replacement, and venous thrombosis

Complications

Coma, intracranial hemorrhage, hypotension, hepatitis, fatal hemorrhage, anaphylaxis

Medication Administration

Tablets by PO
2-10mg daily

IV 2-10mg daily infused over 1-2 minutes

Contraindications/Precautions

Bleeding, blood dyscrasias, cerebral or dissecting aneurysm, cerebrovascular hemorrhage, diverticulitis, eclampsia or preeclampsia, hypersensitivity to warfarin or its components

Nursing Interventions

- Avoid IM injections
- use soft toothbrush
- use electric razor to shave

Interactions

Nicotine patch - altered response to warfarin

herbal remedies - increased anticoagulant effect of warfarin, increased risk of bleeding

Atorvastatin or pravastatin - increased or decreased anticoagulant effect of warfarin

Client Education

- Advise patient to take daily at same time each day
- Weekly blood tests until PT and INR levels are stabilized
- Encourage patient to wear medical ID revealing they are taking warfarin

Evaluation of Medication Effectiveness

Assess for absence or reduction of signs and symptoms of thrombotic disorders

Ensure PTT values within therapeutic range

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Aspirin - Bayer REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic class - Salicylate
Therapeutic class - NSAID

PURPOSE OF MEDICATION

Expected Pharmacological Action

Blocks activity of cyclooxygenase and inhibition of prostaglandins inflammatory symptoms will subside

Therapeutic Use

Relieve mild pain or fever

Complications

CNS depression, GI bleeding, hepatotoxicity, leukopenia, prolonged bleeding time, thrombocytopenia, bronchospasm, angioedema, Reye's syndrome

Medication Administration

Tablets
varying from 75mg to 325mg daily (adults)

Contraindications/Precautions

Active bleeding or coagulation disorders; breastfeeding, current or recent GI bleed or ulcers; hypersensitivity to aspirin, other NSAIDs or their components

Nursing Interventions

- Do Not crush timed-release
- If blood aspirin level reaches or exceeds maximum dosage could experience tinnitus
- Use immediate release aspirin to treat MI or before percutaneous coronary intervent

Interactions

ACE inhibitors/beta blockers - decreased antihypertensive effect
anticoagulants - increase risk of bleeding
diuretics - decreased diuretic effectiveness
heparin - increased risk of bleeding

Client Education

- Take with food or after meals
- Stop taking if bloody or tarry stools or patient coughing up blood
- Do Not take if aspirin has strong vinegar like odor

Evaluation of Medication Effectiveness

Assess for absence of vascular ischemic events

Ensure hemoglobin and hematocrit levels are within normal limits

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Atorvastatin - Lipitor REVIEW MODULE CHAPTER 10

CATEGORY CLASS Pharmacologic - HMG-CoA reductase inhibitor
Therapeutic - antihyperlipidemic

PURPOSE OF MEDICATION

Expected Pharmacological Action

Reduces plasma cholesterol and lipoprotein levels by inhibiting HMG-CoA reductase and cholesterol synthesis in liver

Therapeutic Use

- to control lipid levels as adjunct to diet in primary hypercholesterolemia and mixed dyslipidemia

Complications

Arrhythmias, hypoglycemia, hepatic failure, hepatitis, pancreatitis, rectal hemorrhage, thrombocytopenia, immune-mediated necrotizing myopathy, rhabdomyolysis, anaphylaxis, angioedema

Medication Administration

Tablets - varying amounts from 10mg - 80mg daily

Contraindications/Precautions

Active hepatic disease, breastfeeding, hypersensitivity to atorvastatin or its components, pregnancy, unexplained persistent rise in serum transaminase level

Nursing Interventions

- Do Not use in patients taking cyclosporine or diagnosed with heterozygous familial hypercholesterolemia
- use cautiously in patients who consume substantial quantities of alcohol or liver disease

Interactions

digoxin - increased digoxin level and increased risk of toxicity

Oral contraceptives - increased hormone levels

grapefruit juice - increased blood atorvastatin levels

Client Education

- Take drug at same time every day
- use with a low cholesterol diet
- seek medical attention if develops unexplained muscle pain, tenderness, or weakness

Evaluation of Medication Effectiveness

Nurse monitors lipid response to therapy, looking for decreased levels of total serum cholesterol, LDL cholesterol, triglycerides, and increased levels of HDL cholesterol.
Maximum effects in 4-6 weeks

ACTIVE LEARNING TEMPLATE: *Medication*

STUDENT NAME Ashley Webber

MEDICATION Cyclosporine - Neoral REVIEW MODULE CHAPTER 13

CATEGORY CLASS Pharmacologic: Polypeptide

Therapeutic: Antipsoriatic, antirheumatic, immunosuppressant

PURPOSE OF MEDICATION

Expected Pharmacological Action

Causes immunosuppression by inhibiting the proliferation of T lymphocytes, the production, and release of lymphokines, and the release of interleukin-2, responsible for organ rejection and in disease processes.

Therapeutic Use

To prevent of treat organ rejection in heart, kidney, and liver allogenic transplantation

Complications

Encephalopathy, intracranial hypertension, neurotoxicity, progressive multifocal leukoencephalopathy, seizures, MI, hepatitis, liver failure, pancreatitis, renal failure, leukopenia, thrombocytopenia, cancer, anaphylaxis, hypomagnesemia

Medication Administration

PO: intial - 12-15mg/kg daily

Maint - 5-10mg/kg daily

IV: 5-6mg/kg daily infused over 2-6 hour

Contraindications/Precautions

Abnormal renal function, neoplastic diseases, and uncontrolled hypertension, hypersensitivity to cyclosporine, its components or polyoxyethylated castor oil

Nursing Interventions

- Administer I.V. infusion over 2-6 hours
- Draw blood for labs off of a 2nd IV and not one running med
- Monitor blood pressure
- Monitor liver and renal function tests

Interactions

ACE inhibitors - increased risk of hyperkalemia

NSAIDs - Increased blood concentrations of these drugs and possible toxicity; risk of nephrotoxicity

Statins - risk of myotoxicity

Client Education

- Instruct patient to take drug at same time each day
- Instruct patient to avoid virus vaccines during therapy
- Advise good dental hygiene
- Caution patient to avoid excessive exposure to ultraviolet light.

Evaluation of Medication Effectiveness

Absence of signs and symptoms of a rejection reaction is evidence of therapeutic effects of mycophenolate immunosuppressive therapy

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Heparin REVIEW MODULE CHAPTER 9

CATEGORY CLASS Phamacologic: Anticoagulant
Therapeutic: Anticoagulant

PURPOSE OF MEDICATION

Expected Pharmacological Action

Binds with antithrombin III, enhancing antithrombin III's inactivation of the coagulation enzymes thrombin and factors Xa and XIa.

Therapeutic Use

To prevent and treat peripheral arterial embolism, pulmonary embolism, thromboembolic complications associated with atrial fibrillation, and venous thrombosis

Complications

Thrombosis, adrenal hemorrhage, hematemesis, melena, retroperitoneal hemorrhage, excessive bleeding, asthma, anaphylaxis, heparin resistance, thrombocytopenia

Medication Administration

IV infusion: Immediate onset
peak in minutes

Injection (SubQ): 20-60 minutes onset
peak unknown

Contraindications/Precautions

Breastfeeding, infants, neonates or pregnant woman; hypersensitivity to heparin or its components; inability to monitor coagulation parameters when full-dose heparin is used; severe thrombocytopenia; uncontrolled bleeding

Nursing Interventions

- Use cautiously in alcoholics
- Do not give via IM injection
- Alternate injection sites
- Keep protamine sulfate on hand as it's antidote

Interactions

smoking - decreased anticoagulant effect

NSAIDs - increased platelet inhibition and risk of bleeding

Nitroglycerin (IV) - possibly decreased anticoagulant effect of heparin

Client Education

- Risk for increased bleeding
- Advise patient to avoid drugs such as aspirin & ibuprofen
- Temporary hair loss may occur
- Advise patient to wear or carry appropriate medical ID

Evaluation of Medication Effectiveness

Assess for absence or reduction of signs and symptoms of thrombotic disorders

Ensure aPTT values are within therapeutic range

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Alteplase - Activase

REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic: Tissue plasminogen activator (tPA)
Therapeutic: Thrombolytic

PURPOSE OF MEDICATION

Expected Pharmacological Action

Binds to fibrin in a thrombus and converts trapped plasminogen to plasmin. Plasmin breaks down fibrin, fibrinogen, and other clotting factors which dissolve thrombus

Therapeutic Use

To treat acute MI for reduction of mortality and incidence of heart failure

Complications

Cerebral edema, seizures, arrhythmias, cardiac arrest, cardiac tamponade, cardiogenic shock, heart failure, hypotension, GI bleeding, GU bleeding, pulmonary edema, anaphylaxis, angioedema

Medication Administration

IV injection - intial 15mg bolus over 30 minutes

- 100mg infused over 2hr

under 66lb do 110% human volume not to exceed 2mg/2mL

Contraindications/Precautions

Active internal bleeding, arteriovenous malformation or aneurysm, bleeding diathesis, hypersensitivity to alteplase or its components, intracranial neoplasm, severe uncontrolled hypertension

Nursing Interventions

- Monitor closely for hypersensitivity
- apply pressure at puncture site for at least 30 minutes
- access blood pressure and heart rate/rhythm frequently during and after therapy

Interactions

ACE inhibitors - possible increased risk of angioedema

anticoagulants, antiplatets, vitamin K antagonists: increased risk of bleeding

Client Education

- Tell patient to immediately report bleeding, including from the nose and gums
- Advise patient to limit physical activity to reduce risk of injury and bleeding

Evaluation of Medication Effectiveness

Stabilization of the patient, reversal of symptoms, stabilization of cardiac rhythm, and absence of bleeding complications

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Ezetimibe - Zetia REVIEW MODULE CHAPTER 10

CATEGORY CLASS Pharmacologic: cholesterol absorption inhibitor
Therapeutic: antilipemic

PURPOSE OF MEDICATION

Expected Pharmacological Action

Reduces blood cholesterol by inhibiting its absorption through the small intestine. Blocks cholesterol absorption from the intestine decreases chylomicron and LDL cholesterol content

Therapeutic Use

To treat heterozygous familial and nonfamilial hypercholesterolemia or homozygous sitosterolemia

Complications

Depression, dizziness, fatigue, headache, chest pain, sinusitis, abdominal pain, diarrhea, hepatitis, nausea, pancreatitis, thrombocytopenia, rhabdomyolysis, erythema multiforme, anaphylaxis, angioedema

Medication Administration

Tablets - Adults typically take 10mg daily

Contraindications/Precautions

Active liver disease or unexplained persistent elevations in hepatic transaminase levels, breastfeeding, hypersensitivity to ezetimibe or its components, pregnancy

Nursing Interventions

- Monitor liver enzymes before and during ezetimbe therapy
- Ezetimibe should be given 2 hours before or 4 hours after giving bile acid sequestrant or cholestyramine

Interactions

cholestyramine - reduced effects of ezetimibe

cyclosporine - increased blood cyclosporine & ezetimibe levels

fenofibrate, gemfibrozil - increased blood ezetimibe level

Client Education

- Direct patient to follow low cholesterol diet with recommended weight loss
- Advise patient to report unexplained muscle pain, tenderness or weakness

Evaluation of Medication Effectiveness

- Lipid response to therapy should be decrease in total cholesterol, LDL cholesterol, and triglycerides with increases in HDL cholesterol. Therapeutic response occurs within 2 weeks of initation of therapy

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Methotrexate - Rheumatrex REVIEW MODULE CHAPTER 13

CATEGORY CLASS Pharmacologic- folate antagonist
Therapeutic- antineoplastic

PURPOSE OF MEDICATION

Expected Pharmacological Action

May exert immunosuppresive effects by inhibiting replication and function of T and possibly B lymphocytes. Slows rapidly growing cells such as epithelial skin cells in psoriasis

Therapeutic Use

To treat severe psoriasis, rheumatoid arthritis, active polyarticular juvenile idiopathic arthritis unresponsive to other therapy

Complications

Cerebral thrombosis, seizures, deep vein thrombosis, hypotension, pericardial effusion, pericarditis, cirrhosis, thromboembolism, GI bleeding, hepatitis, hepatotoxicity, pancreatitis, renal failure

Medication Administration

Tablets, IV, IM injection, subcutaneous injection, oral solution

PO, IV, IM 3-6 week onset

Contraindications/Precautions

Breastfeeding, hypersensitivity to methotrexate or its components, pregnancy

Nursing Interventions

- Expect renal impairment
- Monitor results of CBC, chest x-ray, liver and renal function tests and urinalysis before and during treatment

Interactions

Alcohol use- increased risk of hepatotoxicity

Vaccines- risk of disseminated infection with live-virus vaccines, risk of suppressed response to killed virus

NSAIDs- increased risk of methotrexate toxicity

Client Education

- Teach patient prescribed weekly subq injections
- Instruct patient to avoid alcohol
- Instruct patient to use sunblock when exposed to sunlight

Evaluation of Medication Effectiveness

Absence of signs and symptoms of a rejection reaction is evidence of therapeutic effects

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Rivaroxaban - Xarelto REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic - Factor Xa inhibitor
Therapeutic - Anticoagulant

PURPOSE OF MEDICATION

Expected Pharmacological Action

selectively blocks the active site of factor Xa, which plays a central role in the cascade of blood coagulation

Therapeutic Use

To reduce risk of stroke and systemic embolism, prevent deep vein thrombosis, or pulmonary embolism

Complications

- cerebral hemorrhage, subdural hematoma, cytolytic hepatitis, GI bleeding, excessive bleeding, thrombocytopenia, pulmonary hemorrhage, anaphylaxis, angioedema

Medication Administration

Tablets varying in ranges from 2.5mg - 20mg

Contraindications/Precautions

Active pathological bleeding, hypersensitivity to rivaroxaban or its components

Nursing Interventions

- Monitor closely for bleeding
- use cautiously if pregnant
- Monitor for signs/symptoms of hypersensitivity
- Do Not give to patients with prosthetic heart valves

Interactions

anticoagulants/NSAIDs - possible increased bleeding risk

phenytoin - decreased effectiveness of rivaroxaban

verapamil - increased rivaroxaban exposure resulting in increased bleeding risk

Client Education

- Take with food if over 15mg
- patients with A-fib take with evening meal
- Alert providers prior to any procedure or surgery

Evaluation of Medication Effectiveness

Assess for absence or reduction of signs and symptoms of thrombotic disorders.

Ensure aPTT values are with therapeutic range.

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Protamine Sulfate REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic- heparin antagonist
Therapeutic- heparin antidote

PURPOSE OF MEDICATION

Expected Pharmacological Action

Neutralizes anticoagulant activity. A basic polypeptide, protamine combines with strongly acidic heparin complex to form an inactive stable salt

Therapeutic Use

To treat heparin toxicity or hemorrhage associated with heparin therapy

Complications

weakness, bradycardia, hypertension, hypotension, shock, nausea, vomiting, unusual bleeding or bruising, dyspnea, pulmonary edema, pulmonary hypertension, flushing, sensation of warmth, anaphylaxis

Medication Administration

IV injection- 1mg for each 100 units of heparin to be neutralized - do not exceed 50mg in any 10-minute period

Contraindications/Precautions

Allergies to fish, hypersensitivity to protamine or its components

Nursing Interventions

- Inject slowly at 5mg/min
- Obtain aPTT 5-15 minutes after giving drug and repeat every 2-8 hours
- Monitor vital signs, I & O, and assess for flushing sensation

Interactions

heparin - neutralized anticoagulant effect of both drugs

Client Education

- Instruct patient to report adverse reactions immediately

Evaluation of Medication Effectiveness

Effects of heparin toxicity subside or go down to achieve a therapeutic level

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Colesevelam - Welchol REVIEW MODULE CHAPTER 10

CATEGORY CLASS Pharmacologic - Bile acid sequestrant
Therapeutic - Antilipemic, hypoglycemic

PURPOSE OF MEDICATION

Expected Pharmacological Action

Binds with bile acids in intestine, preventing their absorption and forming an insoluble complex that's excreted in feces

Therapeutic Use

With diet and exercise used to control DM type II and/or to reduce elevated LDL cholesterol levels in patients with primary hypercholesterolemia

Complications

Asthenia, hypertension, hypertriglyceridemia, myalgia, hypoglycemia, abdominal distention or pain, constipation, elevated liver enzymes, nausea, rash, pancreatitis, flu-like syndromes

Medication Administration

Oral suspension or tablets

3.75g once daily
or
1.875g twice daily with meal

Contraindications/Precautions

history of bowel obstruction or pancreatitis induced by hypertriglyceridemia, hypersensitivity to colesevelam or its components

Nursing Interventions

- Monitor patients with preexisting constipation are at risk for fecal impaction
- Evaluate patient's liver levels
- Monitor diabetic patient's blood glucose

Interactions

Cyclosporine - possibly altered effectiveness of these drugs
metformin E.R. - increased blood metformin level
phenytoin - decreased plasma phenytoin levels (risk of seizures)
Warfarin - reduced INR, increased risk of clotting

Client Education

- Instruct patient to take with food and drink
- Urge patient to keep and attend regularly scheduled appts for blood tests
- Protect tablets from moisture

Evaluation of Medication Effectiveness

Nurse observes for decreased levels of total serum cholesterol, LDL cholesterol, and triglycerides and increased levels of HDL cholesterol

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Apixaban - Eliquis REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic - Factor Xa inhibitor
Therapeutic: Anticoagulant

PURPOSE OF MEDICATION

Expected Pharmacological Action

Inhibits free and clot bound factor Xa and prothrombinase activity. Also indirectly inhibits platelet aggregation induced by thrombin

Therapeutic Use

To reduce the risk of stroke and systemic embolism in patients with nonvalvular atrial fibrillation or prevent deep vein thrombosis

Complications

hemorrhagic stroke, syncope, GI bleeding, excessive bleeding, rash, anaphylaxis, angioedema

Medication Administration

Tablets

Adults between 2.5-10mg twice daily

Contraindications/Precautions

Active pathological bleeding, severe hypersensitivity to apixaban or its components

Nursing Interventions

- Monitor closely for bleeding
- Apixaban should be stopped 48 hours prior to procedure/surgery
- If stopped abruptly risk of thrombosis increases

Interactions

NSAIDs - possibly increased risk of bleeding

antiplatelets, aspirin, heparin - possibly increased risk of bleeding

phenytoin - decreased effectiveness of apixaban

Client Education

- Do not stop taking without talking to a provider first
- Advise patient to report any unusual bleeding or bruising to prescriber

Evaluation of Medication Effectiveness

Assess for absence or reduction of signs and symptoms of thrombotic disorders

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Vitamin K REVIEW MODULE CHAPTER 9

CATEGORY CLASS Pharmacologic: Vitamins

PURPOSE OF MEDICATION

Expected Pharmacological Action

After absorption, vitamin K is concentrated in the liver. Minimal amounts are stored. It crosses the placental barrier and enters breast milk.

Therapeutic Use

To correct hypoprothrombinemia caused by inadequate levels of vitamin K and to reverse effects of warfarin

Complications

Anaphylaxis, chills, fever, diaphoresis, dyspnea, hypotension, bronchospasm, respiratory arrest, cardiac arrest, shock

Medication Administration

PO for nonbleeding patients

IM & IV associated with severe hypersensitivity reactions

Contraindications/Precautions

Allergic reaction as well as allergic reaction to benzyl alcohol or castor oil

Nursing Interventions

- Ensure patient knows to take as prescribed or as stated on over the counter bottle.
- Monitor blood coagulation tests

Interactions

Bile acid sequestrants - inhibit absorption of vitamin K

Warfarin - will reduce effects of warfarin

Client Education

- Avoid excessive doses of vitamin K (including food)
- Know dietary sources
- Keep intake of vitamin K foods constant

Evaluation of Medication Effectiveness

Decreased signs and symptoms of vitamin K deficiency

Decreased bleeding and more normal range blood coagulation tests

ACTIVE LEARNING TEMPLATE: # Medication

STUDENT NAME Ashley Webber

MEDICATION Gemfibrozil - Lopid

REVIEW MODULE CHAPTER 10

CATEGORY CLASS Pharmacologic - Fibric acid derivative
Therapeutic - Antilipemic

PURPOSE OF MEDICATION

Expected Pharmacological Action

Decrease hepatic triglyceride production by decreasing hepatic extraction of fatty acids. May also inhibit synthesis and increase clearance of apolipoprotein B

Therapeutic Use

With diet to treat hyperlipidemia, to reduce risk of coronary, artery disease, and have had inadequate response to lifestyle changes

Complications

Seizures, hepatoma, pancreatitis, bone marrow hypoplasia, leukopenia, thrombocytopenia, cough, chills, fatigue, headache, blurred vision, eczema, rash, rhabdomyolysis, anaphylaxis, angioedema

Medication Administration

Tablets - give 30 minutes before morning and evening meals (usually 600mg)

Contraindications/Precautions

Concurrent therapy with dasabuvir, repaglinide, selexipag, or simvastatin; gallbladder disease, hepatic or severe renal dysfunction; hypersensitivity to gemfibrozil or its components

Nursing Interventions

- Monitor serum triglyceride and cholesterol levels
- Review CBC and liver enzymes
- Monitor patient's prothrombin time as ordered

Interactions

Statins - increased plasma concentration of these drugs

Oral anticoagulants - increased anticoagulation

resin-granule drugs - decreased blood gemfibrozil levels

Client Education

- Take 30 minutes prior to breakfast and dinner
- Avoid alcohol and smoking
- Advise patient to take missed dose as soon as they remember unless it's close to time for next dose.

Evaluation of Medication Effectiveness

Assess for decreased levels of total serum cholesterol, LDL cholesterol, and triglycerides and increased levels of HDL cholesterol. Takes approximately 1 month.