

Learning Activity 4.1.

Psychotropic Medication Quiz

1. What is the mechanism of action by which **antidepressant medications** achieve the desired effect (regardless of the different physiological processes by which this action is accomplished)?

Psychotropic medication affects neurotransmission. Reuptake is the process of neurotransmitter inactivation. They inhibit serotonin and norepinephrine and or dopamine in the body by blocking their reuptake by the neurons (tricyclics, tetracyclic, SSRI's, SNRI's) or by inhibiting the release of MAOI's.

2. For what must the nurse be on the alert with the client who is receiving **antidepressant medication**?

Seizures !!!!

3. As the nurse, when would you expect the client to begin showing signs of symptomatic relief after the initiation of **antidepressant therapy**?

10-14 days and up to 4-8 weeks

4. Name an example of a tricyclic antidepressant _____ Amitriptyline _____.

Name an example of an MAOI ___ Selegiline _____.

Name an example of an SSRI _____ Sertraline _____.

5. Describe some common side effects and nursing implications for tricyclic antidepressants.

Constipation - Increase H₂O intake, prune juice, fiber, up and moving around (walking), fruits

Drowsiness - take medication at hs if applicable to prevent falls, frequent rest periods, initiate fall precautions, do not operate heavy machinery or drive or any other activity that requires alertness

Sexual problems- can encourage patient to speak with PCP if this is an issue, can be changed to a different medication. (especially for younger adults)

Urine retention - bladder scan, straight catheterization, assess for abdominal distention, I&O

Diarrhea – BRAT diet, fiber, increase water intake, frequent toileting, apply barrier cream to buttocks, can give loperamide if applicable

Xerostomia (dry mouth)– increase water intake, biotene mouth wash, suck on hard candy (SF if diabetic), gum

Anticholinergic effects – dry mouth, blurred vision (stay seated until resolves, sunglasses), photophobia (sunglasses, sun screen), urine retention, constipation, tachycardia (frequent rest periods, talk to HCP due to tachycardia)

6. ___Hypertensive crisis___ is the **most potentially life-threatening adverse effect of MAOIs.**

Symptoms for which the nurse and client must be on the alert include: Headache, nausea, increased HR, increased BP. What must be done to prevent these symptoms from occurring? (Your answer must include some examples.)

Take all of medications as prescribed, check blood pressure regularly at home and write it down, attend dr appts, low salt diet, exercise regularly, avoid Tabacco products, manage stress.

7. Lithium carbonate is commonly prescribed for ___Bipolar disorder_____. Many times when these individuals are started on lithium therapy, the physician also orders an antipsychotic medication. Why might he or she do so? It improves the manic symptoms of patients with bipolar disorder who experience manic episodes. Antipsychotics are used as a short term or long term treatment for BD to control psychotic symptoms such as hallucinations, delusions, or mania symptoms. Lithium promotes sleep, decreases agitation and anxiety, also promotes mood stabilization.
8. There is a narrow margin between the therapeutic and toxic serum levels of lithium carbonate. What is the therapeutic range? List the initial signs and symptoms of lithium toxicity.

Therapeutic range is 1.0 mEq/L to 1.5 mEq/L (acute mania), 0.6 to 1.3 mEq/L (maintenance)

Mild sx- N/V, lethargy, tremor, fatigue

Moderate sx- confusion, agitation, delirium, tachycardia, hypertonia

Toxic- above 1.5 mEq/L

9. Describe some nursing implications for the client on lithium therapy.

Assess mental status initially and periodically. Initiate suicide precautions if indicated. Monitor I&O's, Evaluate renal, thyroid, WBC with diff, serum electrolytes, and glucose periodically during therapy. Monitor lithium levels twice weekly during start of therapy and every 2 months during chronic therapy. Blood draws in the morning immediately before next dose. Assess s/s of lithium toxicity. Administer with food or milk to minimize GI irritation. Take medication as RX'd, take missed dose ASAP unless within 2 hr of next scheduled dose, drink 2000ml-3000ml fluid each day and eat diet with consistent and moderate sodium. Avoid excessive amounts of coffee, tea, cola due to diuretic s/e. Weight gain may occur. Inform dr if pregnant or planning to become pregnant. Use contraception during therapy.

10. What is the mechanism of action for anxiolytics (with the exception of buspirone)?

Exception of Buspirone; Buspirone lacks the anticonvulsant, sedative, and muscle relaxant properties that are associated with other anxiolytics, buspirone has been termed "*anxioselective.*" Buspirone Enhance inhibitory effects of GABA in the CNS = anxiety relief. This medication increases free serotonin plasma concentrations. It decreases SBP and pulse rate through the parasympathetic activation.

11. What is the most commonly used group of anxiolytics? Give two examples.

Benzodiazepine sedative hypnotic anxiolytics = Ativan, Xanax, Diazepam, clonazepam

12. What are the most common side effects of anxiolytics?

Sedation, ataxia, lightheadedness, decreased cognitive function

13. What must the client on long-term anxiolytic therapy be instructed in order to prevent a potentially life-threatening situation? Take medication as prescribed, and do not stop abruptly. If a patient wants to discontinue a medication, encourage them to speak with HCP.

14. What is thought to be the mechanism of action that produces the desired effect with antipsychotic medications? Blocks dopamine D2, acetylcholine, histamine and norepinephrine receptors in the brain and periphery. Inhibits the psychotic manifestations, its also believed to be a result of D2 blockade in the brain.

15. Phenothiazines are an example of a “typical” antipsychotic group. Give two examples of phenothiazines and two examples of the newer “atypical” antipsychotics.

Typical 1st gen- chlorpromazine, thiothixene

Atypical 2nd gen- risperidone, clozapine

Atypical 3rd gen – aripiprazole

16. Describe potential adverse hormonal effects associated with antipsychotic therapy.

Gynecomastia, galactorrhea, and menstrual irregularities

17. Agranulocytosis is a potentially very serious side effect of antipsychotic therapy. The nurse and client should be on the alert for symptoms of **infection indications** – due to low WBC such as cough, congestion, fever, sore throat, weakness, sores in mouth or throat, bleeding gums, low bp, tachycardia, dyspnea.

18. Neuroleptic malignant syndrome (NMS) is a rare but potentially fatal side effect of antipsychotic drugs.

List symptoms for which the nurse must be on the alert when assessing for NMS.

Sudden high-grade fever, BP fluctuations, dysrhythmias, muscle rigidity, diaphoresis, drooling, LOC into a coma

19. Describe the symptoms of extrapyramidal side effects associated with antipsychotic therapy.

Restlessness, involuntary muscle contractions that can be painful, dyskinesias, neuroleptic malignant syndrome (NMS).

20. What is the classification of medication that is commonly prescribed for drug-induced extrapyramidal reactions? Give two examples of these medications. Treat with anticholinergic agents, use oral doses for less acute effects and IV or IM doses for serious effects

Benztropine, diphenhydramine

21. Describe a potentially life-threatening situation that could occur in the client who abruptly withdraws from long-term use of CNS stimulants. Profound dysphoria. Dysphoria is a sense of unhappiness, distress, and indifference. Other symptoms can be nausea, anxiety, headaches, decreased concentration, irritability, agitation, tremors, difficulty sleeping, and depression.

Homework Assignment Questions and Answers

Please read the chapter and answer the following questions:

1. Identify three priority safety concerns for each class of psychotropic medications.

Antianxiety Agents

- a. Dependence with long term use
- b. Confusion; memory impairment; motor incoordination (benzo's)
- c. Nausea, headache, dizziness, restlessness (buspar)

Antipsychotics (novel)

- a. Potential with some of the drugs for mild extrapyramidal symptoms
- b. Sedation, weight gain
- c. Orthostasis and dizziness
- d. Blurred vision, dry mouth, decreased sweating, constipation, urinary retention, tachycardia

Antipsychotics (phenothiazines and haloperidol)

- a. Blurred vision, dry mouth, decreased sweating, urinary retention, tachycardia
- b. Extrapyramidal symptoms
- c. Increased plasma prolactin
- d. Sedation; weight gain
- e. Ejaculation difficulty
- f. Postural hypotension

MAO Inhibitors

- a. Sedation, dizziness
- b. Sexual dysfunction
- c. Hypertensive crisis (interaction with tyramine)

SSNRIs

- a. Nausea
- b. Increased sweating
- c. Insomnia
- d. Tremors
- e. Sexual dysfunction

SSRIs

- a. Nausea
- b. Increased sweating
- c. Insomnia
- d. Tremors
- e. Sexual dysfunction

Tricyclic antidepressants

- a. Sexual dysfunction
- b. Sedation, weight gain
- c. Dry mouth, constipation, blurred vision, urinary retention
- d. Postural hypotension and tachycardia

2. Differentiate primary actions and side effects for traditional versus atypical antipsychotics.

Traditional antipsychotics- in theory it is used to exert their primary action on reduction in dopamine.

S/e- EPS, dystonia's and akathisia, and tardive dyskinesia

Atypical antipsychotics- exert their primary action on serotonin. S/e- diabetes and weight gain

3. Differentiate primary actions and side effects for tricyclic versus SSRI antidepressants.

Tricyclic- exert their primary action on norepinephrine. S/e- anticholinergic activity (orthostatic hypotension)

SSRI- reduce the reuptake of serotonin in the CNS. S/e- CNS side effects such as anxiety, or suicide ideation; sexual dysfunction and hyponatremia