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: Medication that affects psychic function, behavior, or experience.

2. For what must the nurse be on the alert with the client who is receiving antidepressant medication?
    - Serotonin Syndrome: A potentially fatal syndrome of serotonin overstimulation with rapid onset that progresses from diarrhea, restlessness, agitation, hyperreflexia, and fluctuations in vital signs to later symptoms of myoclonus, seizures, hyperthermia, uncontrolled shivering, and muscle rigidity, and ultimately it can lead to delirium, coma, status epilepticus, cardiovascular collapse, and death.

3. As the nurse, when would you expect the client to begin showing signs of symptomatic relief after the initiation of antidepressant therapy?
    - All antidepressant therapies (TCA, SSRI, SNRI, and MAOI) may take up to 2 weeks before signs of improvement are noted and up to 4 weeks to achieve full therapeutic benefits.

4. Name an example of a tricyclic antidepressant _____Diazepam_____.

    Name an example of an MAOI _____Isoniazid_____.

    Name an example of an SSRI _____Trazodone_____.

5. Describe some common side effects and nursing implications for tricyclic antidepressants.
    - Severe Hypertension, Seizures, Serotonin Syndrome, High fever, Convulsions, Death

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: *Severe Occipital Headache, Palpitations, Nausea and Vomiting, Nuchal Rigidity, Fever, Sweating, Increase in Blood Pressure, Chest Pain, and Coma.* What must be done to prevent these symptoms from occurring?
    - *Avoid all other antidepressants, pseudoephedrine, amphetamines, cocaine cyclobenzaprine (Flexeril), dopamine, methyldopa, levodopa, epinephrine, buspirone (Buspar) within 2 weeks of stopping MAOIs.* (Your answer must include some examples.)

7. Lithium carbonate is commonly prescribed for __Bipolar Related Disorders__. Many times, when these individuals are started on lithium therapy, the physician also orders an antipsychotic medication. Why might he or she do so?
    - *Prescribing an Antipsychotic to be helpful in the initial treatment*

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.
    - A typical therapeutic range for lithium is from 0.6 to 1.2 mEq/L
    - Levels over 1.5 mEq/L, increasing nausea, anorexia, and diarrhea are common as well as CNS symptoms such as muscle weakness, drowsiness, ataxia, tremors, and muscle twitching.
    - Even higher levels can lead to delirium, seizures, cardiovascular collapse, or death.

9. Describe some nursing implications for the client on lithium therapy.
    - Patients should be educated about this potential, and weight should be monitored at regular intervals.

10. What is the mechanism of action for anxiolytics (with the exception of buspirone)?
    - Antianxiety drugs depress subcortical levels of the central nervous system (CNS)

11. What is the most commonly used group of anxiolytics? Give two examples.
    - Benzodiazepines: Clonazepam (Klonopin), Diazepam (Valium), Lorazepam (Ativan), and Alprazolam (Xanax)

12. What are the most common side effects of anxiolytics?
    - Confusion; Memory Impairment; Motor Incoordination, Nausea, Headache, Dizziness, Restlessness

13. What must the client on long-term anxiolytic therapy be instructed in order to prevent a potentially life-threatening situation?
    - Black Box Warning related to the serious risks and possible death associated with combining benzodiazepines with opioid pain or cough medicines.

14. What is thought to be the mechanism of action that produces the desired effect with antipsychotic medications?
    - Blocks Dopamine Receptors

15. Phenothiazines are an example of a “typical” antipsychotic group. Give two examples of phenothiazines and two examples of the newer “atypical” antipsychotics.
    - Typical: Phenothiazines, Haloperidol
    - Atypical: Aripiprazole, Asenapine

16. Describe potential adverse hormonal effects associated with antipsychotic therapy.
    - Blurred Vision, Dry Mouth, Decreased Sweating, Constipation, Urinary Retention, Tachycardia

17. Agranulocytosis is a potentially very serious side effect of antipsychotic therapy. The nurse and client should be on the alert for symptoms of _ Sore Throat_, _ Fever_, and _ Malaise_.

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.
    - Fever, Muscle Rigidity, Diaphoresis, Tachycardia

19. Describe the symptoms of extrapyramidal side effects associated with antipsychotic therapy.
    - Akathisia
    - Akinesia
    - Dystonia
    - Oculogyric Crisis

20. What is the classification of medication that is commonly prescribed for drug-induced extrapyramidal reactions? Give two examples of these medications.
    - Cogentin
    - Benadryl

21. Describe a potentially life-threatening situation that could occur in the client who abruptly withdraws from long-term use of CNS stimulants.

- The patient should be instructed not to discontinue therapy abruptly, may result in symptoms of *nervousness*, *agitation*, *headache*, *and tremor*, *and a rapid rise in blood pressure*. Dosage should be tapered gradually under the supervision of the physician.

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

- *Confusion; Memory Impairment, Motor Incoordination, Dizziness*

Antipsychotics (novel)

- *Sedation, Orthostasis, Dizziness*

Antipsychotics (phenothiazines and haloperidol)

- *Sedation, Blurred Vision, Postural hypotension*

MAO Inhibitors

- *Hypertensive crisis, Sedation, Dizziness*

SSNRIs

- *Nausea, Insomnia, Tremors*

SSRIs

- *Hypertensive Crisis, Bleeding, Serotonin Syndrome*

Tricyclic antidepressants

- Postural Hypotension, Tachycardia, Sedation

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

Traditional:

Primary Actions:

Strong D2 Receptor Blockade

Weaker Blockade of: ACh, H1, α1-adrenergic, and 5-HT2 receptors

Side Effects:

Increases plasma prolactin (D2)
Sedation; Weight Gain (H1)
Ejaculatory Difficulty (5-HT2)
Postural Hypotension (α; H1)

Atypical:

Primary Actions:

Receptor Antagonism of: 5-HT1 and 5-HT2, D1–D5 (varies with drug), H1, α1-adrenergic, muscarinic (ACh)

Side Effects:

Sedation, Weight Gain (H1)
Orthostasis and Dizziness (α-adrenergic)
Urinary Retention, Tachycardia (ACh)

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

Tricyclic:

Primary Actions:

Inhibit reuptake of Serotonin (5-HT)

Inhibit reuptake of Norepinephrine (NE)

Block NE (α1) receptor

Block ACh receptor

Block Histamine (H1) receptor

Side Effects:

Sedation, Weight Gain (H1)

Postural Hypotension and Tachycardia (α1)

SSRI:

Primary Actions:

Inhibit reuptake of Serotonin (5-HT)

Side Effects: Nausea, Agitation, Headache, Sexual Dysfunction