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)?

   Most antidepressant work to increase the concentration of norepinephrine, serotonin, and/or dopamine through a complex series of interactions in the body. For TCAs, SSRIS, SNRIs, and some atypical antidepressants, this is believed to be accomplished in the brain by blocking the reuptake of these neurotransmitters. MAOIS antidepressants act by inhibiting the enzyme monoamine oxidase (MAO), which is known to inactivate norepinephrine, serotonin, and dopamine.

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

   The nurse must be alert of neuroleptic malignant syndrome, serotonin syndrome, increased effects of haloperidol, risk of liver injury, risk of seizures, risk for suicide related to depresses mood, sedation, hypertensive crisis, constipation, insomnia, and arrythmias.

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

   As the nurse I would expect the client to begin showing signs of symptomatic relief after the initiation of antidepressant therapy after 4 weeks.

4. Name an example of a tricyclic antidepressant__amitriptyline_____.

   Name an example of an MAOI_____Phenelzine_____.

   Name an example of an SSRI___Sertraline_____.

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

   Side effects of tricyclic antidepressants would be weight gain, dry mouth, constipation, blurred vision, urinary retention, Postural hypotension and tachycardia. Some nursing implications for patient's using these medications would be monitor for any weight changes so taking daily weights while on this medications, checking Intake and output for side effects of urinary retention, before getting the patient up and out of the bed one would monitor their blood pressure, the patient would be placed on a heart monitor, checking the patient's hydration status and making sure to give the patients a lot of fluids to avoid the dry mouth, if applicable to the patient one can try and increase their fiber to combat the constipation, and lastly as the nurse one will make sure their environment is free of clutter and place the patient on fall precautions because of the blurry vision.

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: _chest pain, shortness of breath, headache, elevated blood pressure, and heart rate_____ _____. What must be done to prevent these symptoms from occurring? (Your answer must include some examples.)

   To prevent these symptoms from occurring would be avoiding high tyramine foods such as aged cheese, raisins, fava beans, processed meats, and soy sauce.

7. Lithium carbonate is commonly prescribed for __Mania_____. Many times when these individuals are started on lithium therapy, the physician also orders an antipsychotic medication. Why might he or she do so?

The physician may also order antipsychotic med in conjuction with lithium carbonate because of treatment of bipolar mania. Lithium has a lag period of 7 to 10 days, first generation antipsychotics may be helpful in initial treatment because of the immediate sedative effects.

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.

   The therapeutic range for lithium is 0.6 to 1.2 mEq/L and the initial signs and symptoms of lithium toxicity is nausea, anorexia, diarrhea, muscle weakness, drowsiness, ataxia, tremors, and muscle twitching.

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

Some nursing implications would for lithium therapy would be to have the patients check their lithium levels on a regular basis. Educate the patient to report all medications, herbals, and caffeine use to physician or nurse practitioner to evaluate for drug interactions. One wants to encourage the patient to have their fluid intake at more than 2,000 to 3,000 mL a day. As the nurse we will educate the patient on avoiding activities that involve excessive sweating or fluid loss.

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

Antianxiety drugs depress subcortical levels of the CNS and in particular would be the limbic system and reticular formation. May increase the effectiveness of the powerful inhibitory neurotransmitter GABA in the brain which produces a calmative effect.

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

The most commonly used group of anxiolytics would be benzodiazepines which can include clonazepam and diazepam.

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

The most common side effects of anxiolytics would be impaired cognitive function, psychomotor impairment, sedation, and light headedness.

13. What must the client on long-term anxiolytic therapy be instructed in order to prevent a potentially life-threatening situation?

    The client on a long-term anxiolytic therapy must be instructed in order to prevent a potential life threatening complication is to not stop the medication abruptly.

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

    (First generation) The mechanism of action that produces the desired effect with antipsychotic medications is by blocking postsynaptic dopamine receptors in the basal ganglia, hypothalamus, limbic system, brainstem, and medulla.

    (Second generation):Potent antagonists of the serotonin type 2A receptors. They exhibit antagonism for cholinergic, histaminic, and adrenergic receptors'.

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

    Two examples of the phenothiazines would be haloperidol and loxapine.

    Two examples of the newer atypical antipsychotics would be aripiprazole and olanzapine.

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

    Potential adverse hormonal effects associated with antipsychotic therapy could vary on gender for male patients if could be decreased libido, retrograde ejaculation, and gynecomastia. For the females it would be amenorrhea and galactorrhea.

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.

    Symptoms the nurse must be on alert when assessing for NMS would be fever, muscle rigidity, diaphoresis, tachycardia, and deteriorating mental status.

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

    Symptoms of extrapyramidal side effects associated with antipsychotic therapy include muscle stiffness or spasms, acute dystonia, and abnormal involuntary movements.

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

The classification of medication that is commonly prescribed for drug-induced extrapyramidal reactions would be antiparkinsonian agents such as benzotropine and diphenhydramine

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

    A potential life -threatening situation that could occur in the case of the client who abruptly withdraws from long-term use of CNS stimulants would be suicidal ideation.

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***
****Dependence***
****Restlessness***

Antipsychotics (novel)
****Hyperglycemia***
****Hypotension***
****Dizziness***

Antipsychotics (phenothiazines and haloperidol)
****Dyskinesia***
****seizures***
****Drowsiness***

MAO Inhibitors
****Sedation***
****hypertensive crisis***
****insomnia***

SSNRIs
****Tremors***

***insomnia**
***Fatigue**

SSRIs
***agitation**
***Drowsiness**
***anxiety**

Tricyclic antidepressants
***sedation**
***blurred vision**
***postural hypotension**

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

Primary actions for traditional antipsychotics are they are antagonist that work by blocking postsynaptic dopamine receptors in the basal ganglia, hypothalamus, limbic system, brainstem, and medulla. Demonstrating affinity for cholinergic, alpha 1-adrenergic, and histamine receptors. The side effects for traditional would be extrapyramidal symptoms, tardive dyskinesias, weight gain, sedation, photosensitivity and reduction in seizure threshold.. Where as the primary actions for atypical antipsychotics would be that they are weaker dopamine receptor antagonists than the first generation antipsychotics, but they are more potent antagonists if the serotonin type 2A receptors. Side effects for for the atypical would be weight gain, hyperlipidemia, agranulocytosis, cataracts, and sexual adverse effects.

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

   The primary action for tricyclic is that it inhibits the reuptake of norepinephrine and serotonin whereas in SSRI it inhibits the reuptake on just the serotonin. Side effects going with tricyclic would be Sexual dysfunction, sedation, weight gain, dry mouth, constipation, blurred vision, urinary retention, postural hypotension and tachycardia. In SSRI the side effects would be much narrow such as nausea, agitation, headache, and sexual dysfunction.