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 antidepressants work by blocking the reuptake of neurotransmitters. This means that they are acting as an antagonist, whose action is to block a receptor and minimize the biological reaction. Serotonin and norepinephrine are increased.

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

   The nurse should be on alert for sexual dysfunction, sedation, weight gain, dry mouth, constipation, blurred vision, urinary retention, postural hypotension and tachycardia.

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

   All antidepressants take up to two weeks before the patient shows signs of improvement and up to four weeks for the full therapeutic effect. Signs of improvement occur when the patient has not harmed themselves, has not experienced an injury caused by side effects, maintains vital signs within normal limits, shows signs of improvement in mood (hygiene, interaction with others, hopefulness, improved decision making capabilities, etc), and willingly participated in activities and engages in appropriate activity with others.

4. Name an example of a tricyclic antidepressant **Amoxapine, Trimipramine**.

   Name an example of an MAOI **Isocarboxazid, Tranylcypromine.**

   Name an example of an SSRI **Citalopram, fluoxetine**.

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

   Sexual dysfunction, sedation, weight gain, dry mouth, constipation, blurred vision, urinary retention, postural hypotension, and 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: **severe occipital headache, palpitations, nausea, vomiting, nuchal rigidity, fever, sweating, marked increase in blood pressure, coma, and chest pain.** What must be done to prevent these symptoms from occurring? (Your answer must include some examples.) **Avoid substances containing tyramine. Foods containing tyramine include aged cheeses, raisins, red wines, beer, chocolate, yogurt, and bananas, etc. Drugs containing tyramine include other antidepressants, antihypertensives, OTC cough and cold preparations, opioid narcotics, and antiparkinsonian agents.**
7. Lithium carbonate is commonly prescribed for **mood stabilizing (used to be used to treat and manage bipolar 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? **Lithium therapy has a lag period of seven to ten days. Antipsychotics can be useful in the initial phase of treatment because of the immediate sedative effects. Antipsychotics also increase the effects of lithium. This means that monitoring blood serum levels of lithium are notably important within the first phase of treatment – when lithium and the antipsychotic is taken together.**
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 carbonate is 0.6-1.2 mEq/L. Signs and symptoms of lithium toxicity include renal toxicity, vomiting, diarrhea, nausea, anorexia, muscle weakness, drowsiness, ataxia, muscle twitching, disorientation, and in later stages of lithium toxicity: seizures, coma, and cardiovascular collapse.**
9. Describe some nursing implications for the client on lithium therapy.

   Instruct patient to report all medications, herbals, and caffeine use, maintain fluid intake of 2000-3000 mL/day and avoid activities that cause excessive sweating or fluid loss, and monitor serum lithium levels regularly.

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

    Anxiolytics depress subcortical levels of the CNS. Limbic system and reticular formation are notably depressed. They also potentiate the effects of GABA within the brain to produce a calming effect

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

    Benzodiazepine is the most commonly used group of anxiolytics. Specific drugs include alprazolam (Xanax), diazepam (Valium), and lorazepam (Ativan).

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

    Common side effects include dependence, confusion, memory impairment, motor incoordination, and psychomotor impairment.

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

    The patient should be instructed on the avoidance of combining benzodiazepines with opioid pain or cough medications.

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

    First generation antipsychotics are antagonists that block postsynaptic dopamine receptors in the basal ganglia, hypothalamus, limbic system, brainstem, and medulla. Second generation antipsychotics are weaker dopamine receptor antagonists in comparison to first generation, but are more powerful antagonists of the serotonin type 2A receptors.

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

    Phenothiazines are haloperidol, loxapine, pimozide, and thiothixene. Atypical antipsychotics include aripiprazole, clozapine, and olanzapine.

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

Potential adverse hormonal effects associated with antipsychotic therapy include decreased libido, retrograde ejaculation, gynecomastia, 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 of NMS include fever, muscle rigidity, diaphoresis, and tachycardia.

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

    Symptoms of extrapyramidal side effects include dystonia (muscle spasms of face, arms, legs, and neck), akathisia (continuous restlessness and fidgeting), akinesia (impairment or absence in involuntary movement), oculogyric crisis (uncontrolled rolling back of eyes), pseudoparkinsonism (tremor, shuffling gait, drooling, rigidity), and tardive dyskinesia (bizarre facial and tongue movement, stiff neck, and difficulty swallowing).

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

    An antiparkinsonian agent is administered for drug-induced extrapyramidal reactions. Examples include levodopa, benztropine, and levodopa/carbidopa.

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

    Depression, suicidal ideation, and unstable vital signs may occur in patients who abruptly withdraw from long-term use of CNS stimulants.

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

   1. ***Dependence with long term use***
   2. ***Motor incoordination***
   3. ***Confusion***

   Antipsychotics (novel)

   1. ***Extrapyramidal side effects***
   2. ***Sedation***
   3. ***Diabetes***

   Antipsychotics (phenothiazines and haloperidol)

   1. ***Postural hypotension***
   2. ***Extrapyramidal side effects***
   3. ***Anticholinergic side effects***

   MAO Inhibitors

   1. ***Sedation***
   2. ***Dizziness***
   3. ***Hypertensive crisis***

   SSNRIs

   1. ***Dizziness***
   2. ***Tachycardia***
   3. ***Nausea***

   SSRIs

   1. ***Nausea***
   2. ***Sexual dysfunction***
   3. ***Agitation***

   Tricyclic antidepressants

   1. ***Sedation***
   2. ***Anticholinergic effects***
   3. ***Postural hypotension***

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

   Traditional antipsychotics have the side effects of extrapyramidal effects and work by blocking postsynaptic dopamine receptors in the basal ganglia, hypothalamus, limbic system, brainstem, and medulla. Atypical antipsychotics are a weaker dopamine receptor antagonist but are more potent antagonists of serotonin. Atypical antipsychotics have a lower risk of causing extrapyramidal effects.

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

   Tricyclics inhibit reuptake of norepinephrine or serotonin at the presynaptic neuron and have the side effects of drowsiness, urinary retention, photosensitivity, etc. SSRI selectively inhibit the central nervous system neuronal uptake of serotonin and have side effects of headache, insomnia, anorexia, constipation, and dry mouth.