

Assessment of Patient who is taking neuroleptic drugs

Introduction

Neuroleptic medications, also known as *antipsychotics* or *major tranquilizers*, are primarily used to manage the symptoms and behaviors associated with psychotic disorders and improve the patient's quality of life. They may also be used to treat migraine headaches, leg pain, neuropathy, and seizures or as sedatives or antiemetics.

Neuroleptic medications, which block the transmission of dopamine and the reuptake of norepinephrine and serotonin, have been shown to be highly effective in treating patients with psychotic disorders and, when prescribed cautiously, are generally safe. However, neuroleptic medications can cause adverse effects ranging from mild effects, such as dry mouth, to serious, life-threatening effects such as neuroleptic malignant syndrome (NMS). (See *Neuroleptic malignant syndrome*.)

NEUROLEPTIC MALIGNANT SYNDROME

Neuroleptic malignant syndrome (NMS) is a rare and potentially life-threatening adverse effect associated with the use of neuroleptic medications. It usually develops between 4 and 14 days after the drug is started or the dosage is increased; however, it can occur within hours of the patient taking the medication or it can occur suddenly, after years of therapy. Timely recognition of NMS is essential for the patient's survival.

Risk factors for developing NMS include:

- increased environmental temperatures
- dehydration
- rapid increase in medication dosage
- use of other drugs
- withdrawal of antiparkinsonian medication.

As part of ongoing monitoring for NMS, observe the patient for these signs and symptoms:

- temperature of 101° F to 107° F (38.3° C to 41.7° C)
- tachycardia
- hypertension
- respiratory distress
- diaphoresis
- altered mental status
- urinary incontinence
- muscle rigidity
- sialorrhea
- laboratory test abnormalities such as elevated creatinine phosphokinase and urinary myoglobin levels and leukocytosis
- metabolic acidosis.

Neuroleptic medications are generally divided into two categories: first-generation, conventional drugs and second-generation, atypical drugs. The conventional drugs, such as chlorpromazine and haloperidol (Haldol), have a high incidence of adverse effects, including extrapyramidal symptoms and NMS. Atypical drugs, such as risperidone (Risperdal) and clozapine (Clozaril), cause extrapyramidal symptoms less frequently than conventional drugs; however, they have been documented as having caused NMS as well as other serious adverse effects, including cardiac changes, diabetes, hyperprolactinemia, and significant weight gain.

Equipment

- Sphygmomanometer
- Stethoscope
- Thermometer

Implementation

1. Review the patient's medical record for past and current medication use. *Doing so helps determine if any drug interactions are occurring.*
2. Determine the length of time the patient has been on the neuroleptic medication.
3. Confirm the patient's identity using two patient identifiers according to your facility's policy.
4. Assess the patient's level of consciousness. *Sedation is a possible adverse effect of neuroleptics. Delirium and confusion occur with life-threatening NMS.*
5. Obtain the patient's vital signs. *Orthostatic hypotension is an adverse effect of neuroleptic medications. Cardiac arrhythmias and tachycardia can result from neuroleptic toxicity. Shivering and hypothermia may result from major tranquilizers.*
6. Assess the patient's mucous membranes and fluid status. *The anticholinergic adverse effects of neuroleptic medications can result in a dry mouth, difficulty urinating, and constipation.*
7. Assess the patient's skin, especially after exposure to the sun. *Photosensitivity is a common adverse effect of neuroleptic medications.*
8. Weigh the patient. *Neuroleptic medications cause weight gain, which increases as the length of time on the medication is increased.*
9. Ask the patient whether he has had a change in libido. *The anticholinergic effects of the medication may interfere with sexual interactions. Weight gain and the associated alteration in body image can also directly interfere with sexual relations.*

Nursing alert: Sexual adverse effects associated with these medications tend to result in noncompliance with medication therapy. Encourage the patient to continue the medications despite any adverse effects.

- Assess the patient for extrapyramidal symptoms. (See *Extrapyramidal effects of antipsychotic medications.*)
- Assess the patient for NMS.

EXTRAPYRAMIDAL EFFECTS OF ANTIPSYCHOTIC MEDICATIONS		
<i>Antipsychotic medications can cause extrapyramidal symptoms involving motor coordination. This table provides an overview of these adverse effects and recommendations for treatment.</i>		
Adverse effect	Signs and symptoms	Treatment
<p><i>Acute dystonic reactions</i> Severe muscle spasms that can be life-threatening if not treated immediately</p>	<ul style="list-style-type: none"> • Torticollis (severe twisting of the neck and back) • Opisthotonus (severe arching of the back) • Oculogyric crisis (severe rolling of the eyes into the head) • Laryngospasm (spasm of the throat that causes impaired breathing and swallowing; emergency tracheotomy may be needed) • Oral-facial-maxillary spasms (spasms of the face, lips, and tongue, making it difficult to talk, chew, and eat) 	<ul style="list-style-type: none"> • I.M. administration of diphenhydramine or benztropine to ease the adverse effects
<p><i>Dyskinesias</i> Abnormal muscle movements that aren't as severe as spasms</p>	<ul style="list-style-type: none"> • Facial tics and twitches • Chewing movements • Lip smacking • Blinking • Aimless movements of the tongue • Shoulder shrugging • Pedaling movements of legs • Flailing arms 	<ul style="list-style-type: none"> • Decrease dose of antipsychotic • In some patients, prophylactic treatment with antiparkinsonian drugs such as benztropine
<p><i>Tardive dyskinesia</i> Late onset of any of the dyskinesias; usually doesn't occur until 4 to 6 months after treatment with an antipsychotic has started; can also occur with use of antidepressants that affect dopamine receptors</p>	<ul style="list-style-type: none"> • Signs and symptoms of dyskinesias that may become permanent 	<ul style="list-style-type: none"> • Prevention with careful monitoring of drug dose, use of lowest dose possible, and continuous assessment for adverse effects

<p><i>Parkinsonian reactions</i> Reactions that mimic the onset of Parkinson's disease; generally, one of the earliest reactions (may occur within days of starting an antipsychotic medication)</p>	<ul style="list-style-type: none"> • Stiffness and slowness of voluntary movement • Masklike immobility of facial muscles • Stooped posture • Slow, monotonous speech • Shuffling gait that speeds up on its own • Immobility 	<ul style="list-style-type: none"> • I.M. or I.V. administration of diphenhydramine or benztropine
<p><i>Akathisia</i> Continuous muscle activity that's less intense than dystonias or dyskinesias; the most common type of extrapyramidal symptom</p>	<ul style="list-style-type: none"> • Intolerance of inactivity • Continuous agitation and restlessness • Pacing • Constant leg and finger movements 	<ul style="list-style-type: none"> • Changing to a different antipsychotic or decreasing the dose

Nursing alert: NMS is a life-threatening emergency that requires the patient be transferred to the intensive care unit. Notify the doctor immediately if the patient exhibits signs and symptoms associated with NMS.

- Compare your assessment findings to the patient's history and previous assessment findings *to detect changes in the patient's condition.*
- Validate your findings with the patient, if applicable.
- Notify the doctor of abnormal findings.
- Document the procedure.²

Patient Teaching

Teach the patient about the adverse effects of neuroleptic medications, including the signs and symptoms of extrapyramidal symptoms and NMS. Advise him to contact his doctor immediately if he develops any adverse effects. Emphasize the importance of the patient taking the medication as ordered and to not stop taking it, even if he feels better. Also advise the patient to use sunscreen when sun exposure of longer than 15 minutes is expected. *Patients taking neuroleptics experience photosensitivity and are at increased risk for sunburn.*

Complications

Generally, all neuroleptic medications are capable of causing adverse effects, including hypotension, anticholinergic effects (dry mucous membranes, constipation, urinary

retention, tachycardia, hyperthermia), seizures, hypothermia, respiratory depression, sedation, cardiac arrhythmias, extrapyramidal symptoms, and NMS.

Documentation

Document your assessment findings in the patient's record and any interventions provided. If the doctor was notified of any abnormal findings, note the name of the person who was notified and the time he was notified. Document any teaching provided to the patient and his family.

References

1. The Joint Commission. *Comprehensive Accreditation Manual for Hospitals: The Official Handbook*. Standard NPSG.01.01.01. Oakbrook Terrace, Il.: The Joint Commission, 2010.
2. The Joint Commission. *Comprehensive Accreditation Manual for Hospitals: The Official Handbook*. Standard RC.01.03.01. Oakbrook Terrace, Il.: The Joint Commission, 2010.
3. Mohr, W.K. *Psychiatric-Mental Health Nursing: Evidence-Based Concepts, Skills, and Practices*, 7th ed. Philadelphia: Lippincott Williams & Wilkins, 2008.
4. Videbeck, S.L. *Psychiatric-Mental Health Nursing*, 4th ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

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10. Assess the patient for extrapyramidal symptoms.
11. Assess the patient for NMS.
12. Compare your assessment findings to the patient's history and previous assessment findings.
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