chapter 16

Drugs Used for Anxiety Disorders

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Objectives

1. Define the key words that are associated with anxiety states.
2. Describe the essential components of a baseline assessment of a patient's mental status.
3. Cite the drug therapy used to treat anxiety disorders and any adverse effects that may result.
4. Describe the signs and symptoms that the patient will display when a positive therapeutic outcome is being seen for the treatment of a high-anxiety state.
5. Discuss psychological and physiologic drug dependence.

Key Terms

anxiety (ăng-ZĪ-ĭ-tē) (p. 241)
generalized anxiety disorder (JĔN-ŭr-ăl-īzd ăng-ZĪ-ĭ-tē dĭs-ŌR-dŭr) (p. 241)
panic disorder (PĂN-ĭk) (p. 241)
phobias (FŌ-bē-ăz) (p. 242)
obsessive-compulsive disorder (ŏb-SĔS-ĭv kŏm-PŬL-sĭv) (p. 242)
compulsion (kŏm-PŬL-shŭn) (p. 242)
anxiolytics (ăng-zī-ō-LĬ-tĭks) (p. 242)
tranquilizers (TRĂN-kwĕlī-zŭrz) (p. 242)

ANXIETY DISORDERS

Anxiety is a normal human emotion that is similar to fear. It is an unpleasant feeling of apprehension or nervousness, and it is caused by the perception of potential or actual danger that threatens a person's security. *Mild anxiety* is a state of heightened awareness of one's surroundings, and it is seen in response to day-to-day circumstances. This type of anxiety can be beneficial as a motivator for the individual to take action in a reasonable and adaptive manner. It is sometimes said that people find the inner strength to meet their challenges or "rise to the occasion."

Patients are considered to have *anxiety disorders* when their responses to stressful situations are abnormal or irrational and when they impair normal daily functioning. The National Institute of Mental Health identifies anxiety disorders as the most commonly encountered mental disorders in clinical practice; 16% of the general population will experience anxiety disorders during their lifetimes. Anxiety disorders usually begin before the age of 30 years, and they are more common among women than men. Patients who develop anxiety disorders often have more than one. They may also have major depression or develop substance abuse problems. The most common disorders are generalized anxiety disorder, panic disorder, social phobia, simple phobia, and obsessive-compulsive disorder.

Generalized anxiety disorder is described as excessive and unrealistic worry about two or more life circumstances (e.g., finances, illness, misfortune) for 6 months or more. Symptoms are both psychological (e.g., tension, fear, difficulty concentrating, apprehension) and physical (e.g., tachycardia, palpitations, tremor, sweating, gastrointestinal upset). The disease has a gradual onset, usually among individuals in the 20- to 30-year-old age-group, and it is equally common among both men and women. This illness usually follows a chronic fluctuating course of exacerbations and remissions that are triggered by stressful events in the person's life. Patients with generalized anxiety disorder often develop other psychiatric disorders (e.g., panic disorder, obsessive-compulsive disorder, social anxiety disorder, major depression) at some time during their lives.

Panic disorder is recognized as a separate entity and not as a more severe form of chronic generalized anxiety disorder. The average age of onset is during the late 20s; the disorder is often relapsing, and it may require lifetime treatment. Panic disorder is estimated to affect 1% to 2% of Americans at some time during their lives. Women are affected two to three times more frequently than men. Genetic factors appear to play a significant role in the disease; 15% to 20% of patients will have a close relative with a similar illness. Panic disorder begins as a series of acute or unprovoked anxiety (panic) attacks, which involve an intense, terrifying fear. The attacks do not occur as a result of exposure to anxiety-causing situations, as phobias do. Initially, the panic attacks are spontaneous, but later during the course of the illness they may be associated with certain actions (e.g., driving a car, being in a crowded place). Symptoms include dyspnea, dizziness, palpitations, trembling, choking, sweating, numbness, and chest pain. There are usually feelings of impending doom or a fear of losing control. Patients with panic disorder often develop other psychiatric disorders (e.g., generalized anxiety disorder,

personality disorders, substance abuse, obsessive-compulsive disorder, social anxiety disorder, major depression) at some time during their lives.

Phobias are irrational fears of specific objects, activities, or situations. Unlike other anxiety disorders, the object or activity that creates the feeling of fear is recognized by the patient, who also realizes that the fear is unreasonable. The fear persists, however, and the patient seeks to avoid the situation. *Social phobia* is described as a fear of certain social situations in which the person is exposed to scrutiny by others and fears doing something embarrassing. A social phobia involving public speaking is fairly common, and the activity is usually avoided. If the public speaking is unavoidable, it is done with intense anxiety. Social phobias are rarely incapacitating, but they do cause some interference with social or occupational functioning. A *simple phobia* is an irrational fear of a specific object or situation, such as heights (acrophobia), closed spaces (claustrophobia), air travel, or driving. Phobias that involve animals such as spiders, snakes, and mice are particularly common. If the person with the phobia is exposed to the object, there is an immediate feeling of panic, sweating, and tachycardia. People are aware of their phobias, and they simply avoid the feared objects.

Obsessive-compulsive disorder is the most disabling of the anxiety disorders, although it is responsive to treatment. The primary features of the illness are recurrent obsessions or compulsions that cause significant distress and interfere with normal occupational responsibilities, social activities, and relationships. The average age of onset of the symptoms of obsessive-compulsive disorder is during late adolescence to the early 20s. The condition occurs with equal frequency in men and women, and there also appears to be a genetic component to the disease. An *obsession* is an unwanted thought, idea, image, or urge that the patient recognizes as time-consuming and senseless but that repeatedly intrudes into that patient's consciousness, despite his or her attempts to ignore, prevent, or counteract it. Examples of obsessions are recurrent thoughts of dirt or germ contamination, a fear of losing things, a need to know or remember something, a need to count or check something, blasphemous thoughts, or concerns about something happening to the self or others. An obsession produces a tremendous sense of anxiety in the affected person. A **compulsion** is a repetitive, intentional, purposeful behavior that must be performed to decrease the anxiety associated with an obsession. The act is done to prevent a vague dreaded event, but the person does not derive pleasure from the act. Common compulsions deal with cleanliness, grooming, and counting. When patients are prevented from performing a compulsion, there is a sense of mounting anxiety. In some individuals, the compulsion can become the person's lifetime activity.

DRUG THERAPY FOR ANXIETY DISORDERS

Anxiety is a component of many medical illnesses that involve the cardiovascular, pulmonary, digestive, and endocrine systems. It is also a primary symptom of many psychiatric disorders, including schizophrenia, mania, depression, dementia, and substance abuse. Therefore, the evaluation of the anxious patient requires a thorough history as well as physical and psychiatric examinations to determine whether the anxiety is a primary condition or secondary to another illness. Persistent irrational anxiety or episodic anxiety generally requires medical and psychiatric treatment. The treatment of anxiety disorders usually requires a combination of pharmacologic and nonpharmacologic therapies. When it is decided to treat the anxiety in addition to the other medical or psychiatric diagnoses, antianxiety medications—also known as ***anxiolytics*** or ***tranquilizers***—are prescribed. Obsessive-compulsive disorder is a complex condition that requires a highly individualized and integrated approach to treatment that includes pharmacologic, behavioral, and psychosocial components.

ACTIONS

A great many medications have been used over the decades to treat anxiety. They range from the purely sedative effects of ethanol, bromides, chloral hydrate, and barbiturates to drugs with more specific antianxiety and less sedative activity, such as benzodiazepines, buspirone, meprobamate, hydroxyzine, and propranolol (a beta-adrenergic antagonist). More recently, tricyclic antidepressants (e.g., imipramine), serotonin agonists (selective serotonin reuptake inhibitors), a serotonin and norepinephrine reuptake inhibitor (extended-release venlafaxine), and serotonin antagonists (e.g., ondansetron) have been studied for the treatment of anxiety disorders. See the individual drug monographs later in this chapter for the mechanisms of action of these agents.

USES

Generalized anxiety disorder is treated with psychotherapy and the short-term use of antianxiety agents. The U.S. Food and Drug Administration has approved four classes of compounds or medications for treatment: (1) specific benzodiazepines; (2) paroxetine and escitalopram (selective serotonin reuptake inhibitors); (3) extended-release venlafaxine; and (4) buspirone. To some extent, the beta-adrenergic blocking agents (see Chapter 13) are also used. Barbiturates, meprobamate, and antihistamines such as hydroxyzine are infrequently prescribed. *Panic disorders* may be treated with a variety of agents in addition to behavioral therapy. Alprazolam and clonazepam (benzodiazepines) as well as sertraline, paroxetine, and fluoxetine (selective serotonin reuptake inhibitors) are approved by the

U.S. Food and Drug Administration for the treatment of panic disorder. Other agents that show benefit are the tricyclic antidepressants desipramine and clomipramine as well as mirtazapine and nefazodone (see Chapter 17). *Phobias* are treated with the use of avoidance, behavior therapy, and benzodiazepines or beta-adrenergic blockers such as propranolol or atenolol. *Obsessive-compulsive disorder* is treated with behavioral and psychosocial therapy in addition to paroxetine, sertraline, fluoxetine, or fluvoxamine.

❖ Nursing Implications for Antianxiety Therapy

▪ Assessment

History of Behavior. Obtain a history of the precipitating factors that may have triggered or contributed to the individual's current anxiety. Has the individual been using alcohol or drugs? Has the patient had a recent adverse event, such as a job or relationship loss, the death of a loved one, or a divorce? Has the individual witnessed or survived a traumatic event? Does the individual have any medical problems (e.g., hyperthyroidism) that could be related to these symptoms? Are there symptoms present that could be attributed to a panic attack, such as a feeling of choking, palpitations, sweating, chest pain or discomfort, nausea, abdominal distress, or fear of losing control, going crazy, or dying? Does the person have symptoms of obsessions or compulsions? Does the individual have a history of agoraphobia (i.e., situations in which he or she feels trapped or unable to escape)? Did the attack occur in response to a social or performance situation? Is the client also depressed? What specific fears does the individual have?

Take a detailed history of all medications that the individual is taking. Is there any use of central nervous system (CNS) stimulants (e.g., cocaine, amphetamines) or CNS depressants (e.g., alcohol, barbiturates)? Adverse effects of medications being taken may be aggravating the person's anxiety level.

Ask for details regarding how long the individual has been exhibiting anxiety. Has the person been treated for anxiety previously? When did the symptoms start? Did they begin during intoxication or withdrawal from a substance?

Basic Mental Status. Note the patient's general appearance and appropriateness of attire. Is the individual clean and neat? Is the posture stooped, erect, or slumped? Is the person oriented to date, time, place, and person? Determine whether the patient is at risk for harming herself or himself or others. Is he or she able to participate in self-directed activities of daily living, including eating and providing the self-care that is required to sustain life? These areas are regularly assessed to determine whether acute hospitalization is indicated. Otherwise, the outpatient setting is the most common setting for the treatment of anxiety disorders.

What coping mechanisms has the individual been using to deal with the situation? Are these mechanisms adaptive or maladaptive? Identify the individual's ability to understand new information, follow directions, and provide self-care.

Identify events that trigger anxiety in the individual. Discuss the patient's behavior and thoughts, and foster an understanding of this with his or her family members. Involve the family and significant others in the discussion of the anxiety-producing events or circumstances, and explain how these individuals can help the patient to reduce anxiety or cope more adaptively with stressors. Identify support groups.

Mood and Affect. Is the individual tearful, excessively excited, angry, hostile, or apathetic? Is the facial expression tense, fearful, sad, angry, or blank? Ask the person to describe his or her feelings. Is there worry about real-life problems? Are the person's responses displayed as an intense fear, detachment, or absence of emotions? If the patient is a child, are there episodes of tantrums or clinging?

Patients who are experiencing altered thinking, behavior, or feelings require the careful evaluation of their verbal and nonverbal actions. Often, the thoughts, feelings, and behaviors that are displayed are inconsistent with the so-called "normal responses" of individuals in similar circumstances. Identify management techniques for handling anxiety-producing situations effectively.

Assess whether the mood being described is consistent with or appropriate for the circumstances being described. For example, is the person speaking of death while smiling?

Clarity of Thought. Evaluate the coherency, relevancy, and organization of the patient's thoughts. Ask specific questions about the individual's ability to make judgments and decisions. Is there any memory impairment? Identify areas in which the patient is capable of having input into setting goals and making decisions. (This will help the patient to overcome a sense of powerlessness over certain life situations.) When the patient is unable to make decisions, set goals to involve the patient to the degree of his or her capability, because abilities change with treatment.

Psychomotor Functions. Ask specific questions regarding the activity level that the patient has maintained. Is the person able to work or go to school? Is the person able to fulfill responsibilities at work, socially, or within the family? How have the person's normal responses to daily activities been altered? Is the individual irritable, angry, easily startled, or hypervigilant? Observe the patient for gestures, gait, hand tremors, voice quivering, and actions such as pacing or the inability to sit still.

Obsessions or Compulsions. Does the individual experience persistent thoughts, images, or ideas that are

inappropriate and cause increased anxiety? Are there repetitive physical or mental behaviors, such as handwashing, needing to arrange things in perfect symmetrical order, praying, or silently repeating words? If obsessions or compulsions are present, how often do these occur? Do the obsessions or compulsions impair the person's social or occupational functioning?

Sleep Pattern. What is the person's normal sleep pattern, and how has it varied since the onset of the symptoms? Ask specifically whether insomnia is present. Ask the individual to describe the amount and quality of the sleep. What is the degree of fatigue that is present? Is the individual having recurrent stressful dreams (e.g., after a traumatic event)? Is there difficulty falling or staying asleep?

Dietary History. Ask questions about the individual's appetite, and note weight gains or losses not associated with intentional dieting.

Implementation

- Deal with problems as they occur; practice reality orientation.
- Identify signs of escalating anxiety; decrease the escalation of anxiety.
- Provide a safe, structured environment for the release of energy; set limits on aggressive or destructive behaviors.
- Establish a trusting relationship with the patient by providing support and reassurance.
- Reduce stimulation by having interactions with the patient in a quiet, calm environment. Provide a nonstimulating environment for patients who are having sleeping difficulties (e.g., dim lighting, quiet area) that will encourage drowsiness and sleep.
- Provide an opportunity for the individual to express his or her feelings. Use active listening and therapeutic communication techniques. Be especially aware of cues that would indicate that the patient may be considering self-harm. (If suicidal ideation is suspected, ask the patient directly if suicide is being considered. If necessary, intervene to provide for safety.)

Allow the patient to make decisions of which he or she is capable; make decisions when the client is not capable; and provide a reward for progress when decisions are initiated appropriately. Involve the patient in self-care activities. During periods of severe anxiety or during escalating anxiety, the individual may be unable to have insight or to make decisions appropriately.

Encourage the individual to develop coping skills with the use of various techniques, such as rehearsing or role-playing responses to threatening stressors. Have the individual practice problem solving, and discuss the possible consequences of the solutions that are offered by the patient.

Assist individuals with nonpharmacologic measures, such as music therapy, relaxation techniques, or massage therapy.

Patient Education and Health Promotion

Orient the individual to the unit and the rules of the unit. Explain the process of privileges and how they are obtained or lost. (The extent of the orientation and explanations given will depend on the individual's orientation to date, time, place, and abilities.)

Explain activity groups and resources that are available within the community. A variety of group process activities (e.g., social skills group, self-esteem groups, work-related groups, physical exercise groups) exist in particular therapeutic settings. Meditation, biofeedback, and relaxation therapy may also be beneficial.

Involve the patient and his or her family in goal setting, and integrate them into the available group processes to develop positive experiences for the individual to enhance his or her coping skills.

Patient education should be individualized and based on assessment data to provide the individual with a structured environment in which to grow and enhance self-esteem. Initially, the individual may not be capable of understanding lengthy explanations; therefore, the approaches used should be based on the patient's capabilities.

Explore the coping mechanisms that the person uses in response to stressors, and identify methods of channeling these toward positive realistic goals as an alternative to the use of medication.

Fostering Health Maintenance. Throughout the course of treatment, discuss medication information and how the medication will benefit the patient. Stress the importance of the nonpharmacologic interventions and the long-term effects that compliance with the treatment regimen can provide. Additional health teaching and nursing interventions for adverse effects are described in the drug monographs later in this chapter. Seek cooperation and understanding regarding the following points so that medication compliance is increased: the name of the medication; its dosage, route, and times of administration; and its adverse effects. Instruct the patient not to suddenly discontinue prescribed medications after having been on long-term therapy. Withdrawal should be undertaken with instructions from a health care provider, and it usually requires 4 weeks of gradual reduction in dosage and widen the intervals of administration.

Written Record. Enlist the patient's help with developing and maintaining a written record of monitoring parameters (see the Patient Self-Assessment Form for Antianxiety Medication on the Evolve Web site). Complete the Premedication Data column for use as a baseline to track patient response to drug therapy. Ensure that the patient understands how to use the form, and instruct the patient to bring the completed form to

Table 16-1 Benzodiazepines Used to Treat Anxiety

GENERIC NAME	BRAND NAME	AVAILABILITY	INITIAL DOSAGE (GIVEN BY MOUTH)	MAXIMUM DAILY DOSAGE (mg)
alprazolam	Xanax, Apo-Alpraz ⇄ *Do not confuse Xanax with Zantac or Zyrtec.*	Tablets: 0.25, 0.5, 1, 2 mg Tablets, orally disintegrating: 0.25, 0.5, 1, 2 mg Solution: 1 mg/mL	0.25-0.5 mg three times daily	10
	Xanax XR	Tablets, extended release, 24 hour: 0.5, 1, 2, 3 mg	0.5-1 mg daily	6
chlordiazepoxide ❗ ⇄ *Do not confuse chlordiazepoxide with chlorpromazine.*	Librium ⇄ *Do not confuse Librium with Librax.*	Capsules: 5, 10, 25 mg	5-10 mg three or four times daily	300
clorazepate	Tranxene T, Novo-Clopate	Tablets: 3.75, 7.5, 15 mg	10 mg once to three times daily	60
diazepam ❗ ⇄ *Do not confuse diazepam with Ditropan.*	Valium, Apo-Diazepam ⇄ *Do not confuse Valium with valerian.*	Tablets: 2, 5, 10 mg Liquid: 5 mg/5 mL Concentrate: 5 mg/mL Injection: 5 mg/mL in 2-mL prefilled syringe Rectal gel: 2.5, 10, 20 mg/rectal delivery system	2-10 mg two to four times daily	—
lorazepam ❗ ⇄ *Do not confuse lorazepam with loperamide.*	Ativan, Nu-Loraz ⇄ *Do not confuse Ativan with Ambien or Atarax.*	Tablets: 0.5, 1, 2 mg Liquid: 2 mg/mL Injection: 2, 4 mg/mL in 1-, 10-mL vials)	2-3 mg two or three times daily	10
oxazepam	Apo-Oxazepam	Capsules: 10, 15, 30 mg	10-15 mg three or four times daily	120

Available in Canada.
❗ High-alert medication.

follow-up visits. During follow-up visits, focus on issues that will foster adherence with the therapeutic interventions that have been prescribed.

DRUG CLASS: BENZODIAZEPINES

Benzodiazepines are most commonly used because they are more consistently effective, they are less likely to interact with other drugs, they are less likely to cause overdose, and they have less potential for abuse than barbiturates and other antianxiety agents. They account for perhaps 75% of the 100 million prescriptions that are written annually for anxiety. Six benzodiazepine derivatives are used as antianxiety agents (Table 16-1).

ACTIONS

It is thought that the benzodiazepines have similar mechanisms of action as CNS depressants, but individual drugs in the benzodiazepine family act more selectively at specific sites, which allows for a variety of uses (e.g., sedative-hypnotic, muscle relaxant, antianxiety, anticonvulsant). The benzodiazepines reduce anxiety by stimulating the action of an inhibitory neurotransmitter called *gamma-aminobutyric acid* (GABA), which improves symptoms of sleep disturbance, tremor, and muscle tension.

In patients with reduced hepatic function or in older adults, lorazepam or oxazepam may be most appropriate, because they have a relatively short duration of action and no active metabolites. Oxazepam has been the most thoroughly investigated. The other benzodiazepines all have active metabolites that significantly prolong the duration of action and that may accumulate to the point of excessive adverse effects with chronic administration.

USES

Patients with anxiety reactions to recent events and those with treatable medical illnesses that induce anxiety respond most readily to benzodiazepine therapy. In general, benzodiazepines are equally effective for the treatment of anxiety. Patients generally respond to therapy within 1 week. Because all benzodiazepines have similar mechanisms of action, the selection of the appropriate derivative depends on how the benzodiazepine is metabolized (see "Actions"). Oxazepam, lorazepam, chlordiazepoxide, diazepam, and clorazepate are approved for the treatment of

anxiety associated with alcohol withdrawal. Oxazepam and lorazepam are the drugs of choice, because they have no active metabolites. However, their use is somewhat limited for patients who cannot tolerate oral administration as a result of nausea and vomiting. Diazepam or lorazepam may be administered intramuscularly in this case (see Chapter 49).

THERAPEUTIC OUTCOMES

The primary therapeutic outcome expected from the benzodiazepine antianxiety agents is a decrease in the level of anxiety to a manageable level (i.e., coping is improved; physical signs of anxiety such as a look of anxiety, tremor, and pacing are reduced).

Nursing Implications for Benzodiazepines

Premedication Assessment

1. Record baseline data regarding the level of anxiety that is present.
2. Record the patient's baseline vital signs, particularly blood pressure in both the sitting and supine positions.
3. Check for a history of blood dyscrasias or hepatic disease.
4. Determine whether the individual is pregnant or breastfeeding.

Availability

See Table 16-1.

Dosage and Administration

See Table 16-1. Habitual benzodiazepine use may result in physical and psychological dependence. Rapidly discontinuing benzodiazepines after long-term use may result in symptoms that are similar to those of alcohol withdrawal. Mild withdrawal symptoms have been reported in almost half of patients who received therapeutic doses for as little as 4 to 6 weeks. Common symptoms of withdrawal include restlessness, worsening of anxiety and insomnia, tremor, muscle tension, increased heart rate, and auditory hypersensitivity. More serious withdrawal symptoms include delirium and tonic-clonic seizures. Symptoms may not appear for several days after discontinuation. Prevention consists of the gradual withdrawal of benzodiazepines over the course of 4 weeks.

Pregnancy and Lactation. It is recommended that benzodiazepines not be administered during at least the first trimester of pregnancy. There may be an increased incidence of birth defects, because these agents readily cross the placenta and enter fetal circulation. If benzodiazepines are taken regularly during pregnancy, the infant should be monitored closely after delivery for signs of withdrawal, including sedation and hypotonia.

Mothers who are breastfeeding should not receive benzodiazepines regularly. The benzodiazepines readily cross into the breast milk and exert a pharmacologic effect on the infant.

Monitoring

Common Adverse Effects

Neurologic

Drowsiness, Hangover, Sedation, Lethargy. Patients may complain of morning hangover, blurred vision, and transient hypotension on arising. Explain to the patient the need for rising first to a sitting position, equilibrating, and then standing. Assist the individual with ambulation, if necessary. If hangover becomes troublesome, the dosage should be reduced, the medication changed, or both.

People who work around machinery, drive, administer medication, or perform other duties for which they must remain mentally alert should not take these medications while working.

Serious Adverse Effects

Psychological

Excessive Use or Abuse. Habitual benzodiazepine use may result in physical dependence. Discuss the case with the health care provider, and make plans to cooperatively approach the gradual withdrawal of the medications that are being abused. Assist the patient with recognizing the abuse problem. Identify underlying needs, and plan for the more appropriate management of those needs. Provide emotional support of the individual, display an accepting attitude, and be kind but firm.

Hematologic

Blood Dyscrasias. Routine laboratory studies (e.g., red and white blood cell counts, differential counts) should be scheduled. Stress the patient's need to return for these tests. Monitor the patient for sore throat, fever, purpura, jaundice, or excessive and progressive weakness.

Gastrointestinal

Hepatotoxicity. The symptoms of hepatotoxicity are anorexia, nausea, vomiting, jaundice, hepatomegaly, splenomegaly, and abnormal liver function tests (e.g., elevated bilirubin, aspartate aminotransferase [AST], alanine aminotransferase [ALT], gamma-glutamyltransferase [GGT], alkaline phosphatase levels, increased prothrombin time).

Drug Interactions

Antihistamines, Alcohol, Analgesics, Anesthetics, Probenecid, Tranquilizers, Narcotics, Cimetidine, Other Sedative-Hypnotics. All these agents increase the toxic effects of benzodiazepines and may cause excessive sedation and impaired psychomotor function.

Oral Contraceptives, Cimetidine, Fluoxetine, Metoprolol, Propranolol, Isoniazid, Ketoconazole, Valproic Acid. These agents inhibit the metabolism of alprazolam,

chlordiazepoxide, clonazepam, and diazepam. Pharmacologic effects of the benzodiazepines may be increased, and excessive sedation and impaired psychomotor function may result.

Smoking and Rifampin. Smoking and rifampin enhance the metabolism of benzodiazepines. Larger doses may be necessary to maintain anxiolytic effects in patients who smoke.

DRUG CLASS: AZASPIRONES

buspirone (byū-SPĪ-rōn)

⇄ *Do not confuse buspirone with bupropion.*

BuSpar (BYŪ-spăr)

ACTIONS

Buspirone is an antianxiety agent that comes from the chemical class known as the *azaspirones*, which are chemically unrelated to the barbiturates, benzodiazepines, or other anxiolytic agents. The mechanism of action of buspirone is not fully understood. It is a partial serotonin and dopamine agonist, and it interacts in several ways with nerve systems in the midbrain; therefore, it is sometimes called a *midbrain modulator*. It does not affect gamma-aminobutyric acid receptors. Its advantages over other antianxiety agents are that it has lower sedative properties and it does not alter psychomotor functioning. It requires 7 to 10 days of treatment before initial signs of improvement are evident, and it takes 3 to 4 weeks of therapy for optimal effects to occur.

USES

Buspirone is approved for use in the treatment of anxiety disorders and for the short-term relief of the symptoms of anxiety. Buspirone has no antipsychotic activity, and it should not be used in place of appropriate psychiatric treatment. Because there is minimal potential for abuse with buspirone, it is not a controlled substance.

THERAPEUTIC OUTCOMES

The primary therapeutic outcome expected from buspirone is a decrease in the level of anxiety to a manageable level (i.e., coping is improved; physical signs of anxiety such as a look of anxiety, tremor, and pacing are reduced).

❖ Nursing Implications for Buspirone Therapy

▪ Premedication Assessment

Record baseline data regarding the level of anxiety present.

▪ Availability

PO: 5-, 7.5-, 10-, 15-, and 30-mg tablets. Schedule assessments periodically throughout therapy for the development of slurred speech or dizziness, which are signs of excessive dosing.

▪ Dosage and Administration

Adult: PO: Initially, 5 mg three times daily. Doses may be increased by 5 mg every 2 to 3 days. Maintenance therapy often requires 30 mg daily in divided doses. Do not exceed 60 mg daily.

▪ Monitoring

Common Adverse Effects

Neurologic

Sedation, Lethargy. The most common adverse effects of buspirone therapy are CNS disturbances (3.4%), which include dizziness, insomnia, nervousness, drowsiness, and lightheadedness. People who work around machinery or who perform other duties for which they must remain mentally alert should not take this medication while working.

Serious Adverse Effects

Neurologic

Slurred Speech, Dizziness. These are signs of excessive dosing. Report to the health care provider for further evaluation. Provide patient safety during these episodes.

▪ Drug Interactions

Itraconazole, Erythromycin, Nefazodone, Clarithromycin, Diltiazem, Verapamil, Fluvoxamine, Grapefruit Juice. These substances potentiate the toxicity of buspirone by inhibiting the metabolism of buspirone. If any of these are used together, the dose of buspirone should be reduced by half for a few weeks and then adjusted as needed.

Rifampin, Phenytoin, Phenobarbital, Carbamazepine. These drugs enhance the metabolism of buspirone. An increase in the dose of buspirone may be needed.

Alcohol. Buspirone and alcohol generally do not have additive CNS depressant effects, but individual patients may be susceptible to impairment. Use alcohol with extreme caution.

DRUG CLASS: SELECTIVE SEROTONIN REUPTAKE INHIBITORS

fluvoxamine (flū-VŌKS-ă-mēn)

⇄ *Do not confuse fluvoxamine with fluoxetine.*

Luvox (LŪ-vŏks)

⇄ *Do not confuse Luvox with Lasix, Levoxyl, or Lovenox.*

ACTIONS

Fluvoxamine inhibits the reuptake of serotonin at nerve endings, thus prolonging serotonin activity.

USES

Fluvoxamine is used for the treatment of obsessive-compulsive disorder when obsessions or compulsions cause marked distress, are time-consuming, or

interfere substantially with social or occupational responsibilities. Fluvoxamine reduces the symptoms of this disorder but does not prevent obsessions and compulsions. However, patients indicate that the obsessions are less intrusive and that they have more control over them.

THERAPEUTIC OUTCOMES

The primary therapeutic outcome expected from fluvoxamine is a decrease in the level of anxiety to a manageable level (i.e., coping with obsession is improved, frequency of compulsive activity is reduced).

Nursing Implications for Fluvoxamine Therapy

See "Selective Serotonin Reuptake Inhibitors" on p. 261.

DRUG CLASS: MISCELLANEOUS ANTIANXIETY AGENTS

hydroxyzine (hī-DRŎKS-ĭ-zēn)
⇄ *Do not confuse hydroxyzine with hydroxyurea.*
Vistaril (VĬS-tă-rĭl)
⇄ *Do not confuse Vistaril with Restoril, Versed, or Zestril.*
Atarax (Ă-tă-răks)
⇄ *Do not confuse Atarax with Ativan.*

ACTIONS

When defined strictly by chemical structure, hydroxyzine is considered an antihistamine. It acts within the CNS to produce sedation as well as antiemetic, anticholinergic, antihistaminic, antianxiety, and antispasmodic activity, thus making it a somewhat multipurpose agent.

USES

Hydroxyzine is used as a mild tranquilizer for psychiatric conditions that are characterized by anxiety, tension, and agitation. It is also occasionally used as a preoperative or postoperative sedative to control vomiting, diminish anxiety, and reduce the amount of narcotics that are needed for analgesia. Hydroxyzine may also be used as an antipruritic agent to relieve the itching that is associated with allergic reactions.

THERAPEUTIC OUTCOMES

The primary therapeutic outcomes expected from hydroxyzine are as follows:

1. A decrease in the level of anxiety to a manageable level (i.e., coping is improved; physical signs of anxiety such as a look of anxiety, tremor, and pacing are reduced)
2. Sedation, relaxation, and reduction in analgesics before and after surgery
3. Absence of vomiting when used as an antiemetic
4. Itching controlled during allergic reactions

Nursing Implications for Hydroxyzine Therapy

Premedication Assessment

1. Perform a baseline assessment of anxiety symptoms.
2. Determine the patient's level of anxiety present before and after surgical intervention; record and intervene appropriately.
3. For nausea and vomiting, administer when nausea first starts, and determine the effectiveness of control before giving subsequent doses.
4. For allergic reactions, perform a baseline assessment of physical symptoms before administering the dose; repeat this assessment before the administration of subsequent doses to determine the medication's effectiveness.
5. Monitor the patient for the level of sedation present, slurred speech, or dizziness; report to the health care provider if these symptoms are excessive before administering repeat doses.

Availability

PO: 10-, 25-, 50-mg tablets; 25-, 50-, and 100-mg capsules; 10 mg/5 mL syrup; IM: 25 and 50 mg/mL.

Dosage and Administration

Adult

- Antianxiety: *PO:* 25 to 100 mg three or four times daily; *IM:* 50 to 100 mg every 4 to 6 hours
- Preoperatively and postoperatively: *IM:* 25 to 100 mg
- Antiemetic: *IM:* 25 to 100 mg

Monitoring

Common Adverse Effects. These symptoms are the anticholinergic effects that are produced by hydroxyzine. Patients who are taking these medications should be monitored for the development of these adverse effects.

Sensory

Blurred Vision. Caution the patient that blurred vision may occur, and make appropriate suggestions for personal safety.

Gastrointestinal

Constipation, Dryness of the Mucosa of the Mouth, Throat, and Nose. Mucosal dryness may be relieved by sucking hard candy or ice chips or by chewing gum. The use of stool softeners (e.g., docusate) may be required for constipation.

Neurologic

Sedation. People who work around machinery, drive, administer medication, or perform other duties for which they must remain mentally alert should not take these medications while working.

Serious Adverse Effects

Neurologic

Slurred Speech, Dizziness. These are signs of excessive dosing. Report to the health care provider for further

evaluation. Provide patient safety during these episodes.

Drug Interactions

Antihistamines, Alcohol, Analgesics, Anesthetics, Tranquilizers, Barbiturates, Narcotics, Other Sedative-Hypnotics. These all are agents that can increase toxic effects. Monitor the patient for excessive sedation, and reduce the dosage of hydroxyzine if necessary.

meprobamate (měp-rō-BĂM-āt)

ACTIONS

Meprobamate acts on multiple sites within the CNS to produce mild sedation, antianxiety, and muscle relaxation. The mechanism of action is unknown.

USES

Meprobamate is used as an antianxiety agent and a mild skeletal muscle relaxant for the short-term relief (i.e., less than 4 months) of anxiety and tension. It is of little use for the treatment of psychoses.

THERAPEUTIC OUTCOMES

The primary therapeutic outcome expected from meprobamate is a decrease in the level of anxiety to a manageable level (i.e., coping is improved; physical signs of anxiety such as a look of anxiety, tremor, and pacing are reduced).

Nursing Implications for Meprobamate Therapy

Premedication Assessment

Record baseline data regarding the level of anxiety present.

Availability

PO: 200- and 400-mg tablets. Schedule assessments periodically throughout therapy for the development of slurred speech or dizziness, which are signs of excessive dosing, use, or abuse.

Dosage and Administration

Adult: PO: 400 mg three or four times daily. Smaller doses may work well for older adults and debilitated patients. The maximum daily dosage should not exceed 2400 mg.

Monitoring

Common Adverse Effects

Neurologic

Sedation. People who work around machinery, drive, administer medication, or perform other duties for which they must remain mentally alert should not take these medications while working.

Serious Adverse Effects

Neurologic

Slurred Speech, Dizziness. These are signs of excessive dosing. Report to the health care provider for further evaluation. Provide patient safety during these episodes.

Psychological

Excessive Use or Abuse. Psychological and physiologic dependence may occur in patients who are taking doses of 3.3 to 6.4 g/day for 40 days or more. Symptoms of chronic use and abuse of high doses include ataxia, slurred speech, and dizziness. Withdrawal reactions such as vomiting, tremors, confusion, hallucinations, and tonic-clonic seizures may develop within 12 to 48 hours after abrupt discontinuation. Symptoms usually decline within the next 12 to 48 hours. Withdrawal from high and prolonged doses should be completed gradually over the course of 1 to 2 weeks.

Discuss the case with the health care provider, and make plans to cooperatively approach the gradual withdrawal of the medications being abused. Assist the patient with recognizing the abuse problem. Identify underlying needs, and plan for the more appropriate management of those needs. Provide emotional support of the individual, display an accepting attitude, and be kind but firm.

Cardiovascular

Orthostatic Hypotension (Dizziness, Weakness, Faintness), Dysrhythmias. Although infrequent and generally mild, meprobamate may cause some degree of orthostatic hypotension, which is manifested by dizziness and weakness, particularly when therapy is being initiated. Anticipate the development of postural hypotension, and take measures to prevent such an occurrence. Teach the patient to rise slowly from a supine or sitting position; encourage the patient to sit or lie down if he or she is feeling faint. Monitor the patient's blood pressure daily in both the supine and standing positions. Withhold doses and report for further evaluation.

Neurologic

Paradoxical Excitement. Withhold doses and report for further evaluation.

Hypersensitivity Reaction

Hives, Pruritus, Rash. Report symptoms for further evaluation by the health care provider. Pruritus may be relieved by adding baking soda to the bathwater.

Drug Interactions

Antihistamines, Alcohol, Analgesics, Tranquilizers, Narcotics, Other Sedative-Hypnotics. All these agents may increase toxic effects. Monitor the patient for excessive sedation, and reduce the dosage of the meprobamate if necessary.

Get Ready for the NCLEX® Examination!

Key Points

- Anxiety is an unpleasant feeling of apprehension or nervousness that is caused by the perception of danger threatening the person's security. In most cases, it is a normal human emotion.
- When a person's response to anxiety is irrational and impairs his or her daily functioning, then he or she is said to have an anxiety disorder. Some 16% of the general population will experience an anxiety disorder during their lifetimes.
- The most common types of anxiety disorders are generalized anxiety disorder, panic disorder, social phobia, simple phobia, and obsessive-compulsive disorder.
- Anxiety is a component of many medical illnesses that involve the cardiovascular, pulmonary, digestive, and endocrine systems. It is also a primary symptom of many psychiatric disorders. Therefore, the evaluation of the anxious patient requires a thorough history as well as physical and psychiatric examination to determine whether the anxiety is the primary condition or secondary to another illness. Persistent irrational anxiety or episodic anxiety usually requires medical and psychiatric treatment.
- The treatment of anxiety disorders usually requires a combination of pharmacologic and nonpharmacologic therapies.
- It is the responsibility of the nurse to educate patients about their therapy, to monitor for therapeutic benefits and common and serious adverse effects, and to intervene whenever possible to optimize therapeutic outcomes.

Additional Learning Resources

SG Go to your Study Guide for additional Review Questions for the NCLEX® Examination, Critical Thinking Clinical Situations, and other learning activities to help you master this chapter's content.

Evolve Go to your Evolve Web site (http://evolve.elsevier.com/Clayton) for the following FREE learning resources:

- Animations
- Appendices
- Drug dosage calculators
- Drugs@FDA (a catalog of FDA-approved drug products)
- Gold Standard Patient Teaching Handouts in English and Spanish
- Interactive Drug Flashcards
- Interactive Review Questions for the NCLEX® Examination and more!

Review Questions for the NCLEX® Examination

1. A nurse is determining the type of anxiety that a patient is experiencing. The patient states that he always counts the number of steps that it takes to walk to his car. This is an example of:
   1. generalized anxiety disorder.
   2. obsessive-compulsive disorder.
   3. phobia related to walking.
   4. a panic attack.

2. The benzodiazepine drug monograph lists hepatotoxicity as a serious adverse effect. Which laboratory tests are performed to assess this?
   1. Bilirubin, alkaline phosphatase, gamma-glutamyltransferase (GGT), and prothrombin time
   2. Albumin, ferritin, and prothrombin time
   3. Aspartate aminotransferase (AST), gamma-glutamyltransferase GGT, and ferritin
   4. Creatinine, creatinine clearance, and albumin

3. A patient is receiving a benzodiazepine. Which laboratory values does the nurse monitor?
   1. Complete blood cell count with differential and liver function
   2. Complete blood cell count and renal function
   3. White blood cell count and biochemical profile
   4. Blood glucose

4. What information does the nurse include during patient teaching for antianxiety therapy?
   1. "You may take this medication while operating machinery."
   2. "When discontinuing the medication, there is no need to reduce the dose gradually."
   3. "Notify your physician if hangover symptoms persist, because the dose may need to be reduced or the medication changed."
   4. "Therapeutic effects of the drug take 4 to 6 weeks to occur."

5. Which drug(s) may increase the toxic effects of benzodiazepines? *(Select all that apply.)*
   1. Antihistamines
   2. Alcohol
   3. Analgesics
   4. Beta blockers
   5. Beta-adrenergic agonists