

## Leprostatic Drugs

### Key Terms

hemolysis  
leprosy

*Mycobacterium*  
*leprae*

### Chapter Objectives

On completion of this chapter, the student will:

- Discuss the drugs used in the treatment of leprosy.
- Discuss the uses, general drug action, contraindications, precautions, interactions, and general adverse reactions associated with the administration of the leprostatic drugs.
- Discuss important preadministration and ongoing assessment activities the nurse should perform on the patient taking a leprostatic drug.
- List some nursing diagnoses particular to a patient taking a leprostatic drug.
- Discuss the ways to promote an optimal response to therapy, how to manage adverse reactions, and important points to keep in mind when educating patients about the use of the leprostatic drugs.

**L**eprosy is a chronic, communicable disease spread by prolonged, intimate contact with an infected person. Peripheral nerves are affected, and skin involvement is present. Lesions may be confined to a few isolated areas or may be fairly widespread over the entire body. Treatment with the leprostatic drugs provides a good prospect for controlling the disease and preventing complications.

Leprosy, also referred to as Hansen's disease, is caused by the bacterium *Mycobacterium leprae*. Although rare in colder climates, this disease may be seen in tropical and subtropical zones. Dapsone and clofazimine (Lamprene) are the two drugs currently used to treat leprosy. The leprostatic drugs are listed in the Summary Drug Table: Leprostatic Drugs.

### CLOFAZIMINE

#### ACTIONS AND USES

Clofazimine is primarily bactericidal against *M. leprae*. The exact mode of action of this drug is unknown. Clofazimine is used to treat leprosy.

### ADVERSE REACTIONS

Clofazimine may cause pigmentation of the skin, abdominal pain, diarrhea, nausea, and vomiting.

### CONTRAINDICATIONS, PRECAUTIONS, AND INTERACTIONS

Clofazimine is used cautiously in patients with gastrointestinal disorders, diarrhea, and during pregnancy (Pregnancy Category C) and lactation. If clofazimine is used during pregnancy, the infant may be born with pigmented skin. No significant drug-drug interactions are associated with the use of clofazimine.

### DAPSONE

#### ACTIONS AND USES

Dapsone is bactericidal and bacteriostatic against *M. leprae*. The drug is used to treat leprosy. Dapsone

## SUMMARY DRUG TABLE LEPROSTATIC DRUGS

GENERIC NAME	TRADE NAME*	USES	ADVERSE REACTIONS	DOSAGE RANGES
clofazimine <i>kloe-fazz-ih-meen</i>	Lamprene	Leprosy	Skin pigmentation (pink to brownish-black), skin dryness, rash, abdominal/epigastric pain, nausea, dryness, burning, or itching of the eyes	100–200 mg/d PO
dapsone <i>dap'-sone</i>	<i>generic</i>	Leprosy; dermatitis herpetiformis	Blood cell hemolysis, anemia, peripheral neuropathy, headache, insomnia, phototoxicity, nausea, vomiting, anorexia, blurred vision	50–300 mg/d PO

\*The term *generic* indicates the drug is available in generic form.

may also be used in the treatment of dermatitis herpetiformis, a chronic, inflammatory skin disease.

## ADVERSE REACTIONS

Administration of dapsone may result in **hemolysis** (destruction of red blood cells), nausea, vomiting, anorexia, and blurred vision.

## CONTRAINDICATIONS, PRECAUTIONS, AND INTERACTIONS

Dapsone is used with caution in patients with anemia, severe cardiopulmonary disease, hepatic dysfunction, and during pregnancy (Pregnancy Category C). Dapsone is contraindicated during lactation. Substantial amounts of dapsone are excreted in breast milk and can cause hemolytic reactions in neonates. No significant drug–drug interactions are associated with the use of dapsone.

## NURSING PROCESS

### ● The Patient Receiving a Leprostatic Drug

#### ASSESSMENT

##### *Preadministration Assessment*

It is important to perform a complete physical examination and history before the institution of therapy. The nurse examines the involved areas and describes them in detail on the patient's record to provide a database for comparison during therapy.

## ONGOING ASSESSMENT

These drugs are often given on an outpatient basis. Each time the patient is seen in the clinic or primary health care provider's office, the nurse performs a general physical examination, with particular attention given to the affected areas.

## NURSING DIAGNOSES

Drug-specific nursing diagnoses are highlighted in the Nursing Diagnoses Checklist. More general nursing diagnoses applicable to these drugs are discussed in depth in Chapter 4.

## PLANNING

The expected outcomes for the patient may include an optimal response to drug therapy and an understanding of and compliance with the prescribed treatment regimen.

## IMPLEMENTATION

### *Promoting an Optimal Response to Therapy*

Treatment with a leprostatic drug may require many years. These patients are faced with long-term medical and drug therapy and possibly severe disfigurement. The nurse must spend time with these patients, allowing them to verbalize their anxieties, problems, and fears.

It is important to give the leprostatic drugs orally and with food to minimize gastric upset. The nurse can give antitubercular drugs, such as rifampin, concurrently

### Nursing Diagnoses Checklist

- ✓ **Impaired Skin Integrity** related to adverse reactions of the leprostatic drugs

during initial therapy to minimize bacterial resistance to the leprostatic drug.

### **Educating the Patient and Family**

The nurse is alert to patient statements regarding compliance with the long-term treatment regimen. It is important to note factors, such as depression or indifference, that may be indicative of treatment noncompliance. The nurse uses a positive approach when doing patient and family teaching. The nurse informs the patient that changes in skin pigmentation may occur, ranging from red to brownish-black. Skin discoloration may take months to years to reverse after use of the drug is discontinued.

To ensure compliance with the treatment regimen, the nurse explains the dosage schedule, possible adverse effects, and the importance of scheduled follow-up visits to the patient and family members. In particular, the nurse emphasizes the importance of adhering to the prescribed dosage schedule.

### **EVALUATION**

- The therapeutic drug effect is achieved.
- The patient verbalizes an understanding of treatment modalities and the importance of continued follow-up care.
- The patient and family demonstrate understanding of the drug regimen.
- The patient complies with the prescribed drug regimen.

### **● Critical Thinking Exercises**

1. *Mr. Winters is very anxious about his newly diagnosed leprosy and his treatment regimen with dapson. Discuss what you could do to decrease his anxiety. Determine what information you would include when educating Mr. Winters about the treatment regimen.*
2. *Mr. York has been prescribed clofazimine daily to manage his leprosy. Discuss what preadministration assessments the nurse should make. Explain what information you would include in a teaching plan for Mr. York.*

### **● Review Questions**

1. Before administration of the initial dose of a leprostatic drug, it is most important for the nurse to assess \_\_\_\_\_.
  - A. range of motion
  - B. mental ability
  - C. vital signs
  - D. affected areas on the patient's body
2. Which of the following adverse reactions would the nurse expect with the administration of clofazimine?
  - A. hypotension
  - B. blurred vision
  - C. pigmentation of the skin
  - D. jaundice
3. Which of the following hematologic changes may result from the administration of dapson?
  - A. hemolysis
  - B. leukopenia
  - C. decreased platelets
  - D. increase in the hematocrit
4. When educating the patient about taking a leprostatic drug, the nurse would include which of the following information?
  - A. This drug regimen will require that you take the drug faithfully for at least 3 months.
  - B. Take the drug with food to minimize gastric upset.
  - C. Skin lesions should clear within 3 days.
  - D. The drug should be taken on an empty stomach at bedtime to minimize gastric upset.

### **● Medication Dosage Problems**

1. The patient is prescribed 150 mg of dapson. On hand are 50-mg tablets. The nurse administers \_\_\_\_.
2. A patient with leprosy is prescribed clofazimine 100 mg daily PO. The drug is available in 200-mg tablets. The nurse administers \_\_\_\_.