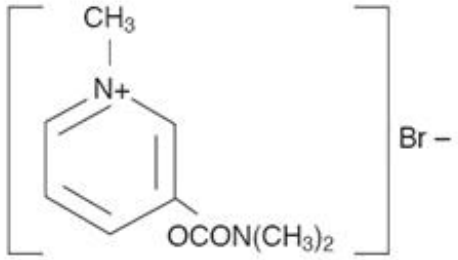
PYRIDOSTIGMINE BROMIDE- pyridostigmine bromide tablet
Cadila Healthcare Limited

Pyridostigmine Bromide Tablets, USP

Rx only

DESCRIPTION

Pyridostigmine bromide tablets, USP are an orally active cholinesterase inhibitor. Chemically, pyridostigmine bromide is 3-hydroxy-1-methylpyridinium bromide dimethylcarbamate. Its structural formula is:



Pyridostigmine bromide, USP is a white or almost white crystalline, deliquescent powder. It is very soluble in water and in alcohol, slightly soluble in hexane, practically insoluble in ether.

Each pyridostigmine bromide tablet, USP intended for oral administration contains 60 mg of pyridostigmine bromide, USP. In addition, each tablet contains the following inactive ingredients: anhydrous lactose, colloidal silicon dioxide, low substituted hydroxypropyl cellulose, silicon dioxide and stearic acid.

CLINICAL PHARMACOLOGY

Pyridostigmine bromide inhibits the destruction of acetylcholine by cholinesterase and thereby permits freer transmission of nerve impulses across the neuromuscular junction. Pyridostigmine is an analog of neostigmine (Prostigmin®#), but differs from it in certain clinically significant respects; for example, pyridostigmine is characterized by a longer duration of action and fewer gastrointestinal side effects.

INDICATIONS AND USAGE

Pyridostigmine bromide tablets, USP are useful in the treatment of myasthenia gravis.

CONTRAINDICATIONS

Pyridostigmine bromide tablets, USP are contraindicated in mechanical intestinal or urinary obstruction, and particular caution should be used in its administration to patients with bronchial asthma. Care should be observed in the use of atropine for counteracting side effects, as discussed below.

WARNINGS

Although failure of patients to show clinical improvement may reflect underdosage, it can also be

indicative of overdosage. As is true of all cholinergic drugs, overdosage of pyridostigmine bromide may result in cholinergic crisis, a state characterized by increasing muscle weakness which, through involvement of the muscles of respiration, may lead to death. Myasthenic crisis due to an increase in the severity of the disease is also accompanied by extreme muscle weakness, and thus may be difficult to distinguish from cholinergic crisis on a symptomatic basis. Such differentiation is extremely important, since increases in doses of pyridostigmine bromide or other drugs of this class in the presence of cholinergic crisis or of a refractory or "insensitive" state could have grave consequences. Osserman and Genkins[1] indicate that the differential diagnosis of the two types of crisis may require the use of Tensilon®# (edrophonium chloride) as well as clinical judgment. The treatment of the two conditions obviously differs radically. Whereas the presence of myasthenic crisis suggests the need for more intensive anticholinesterase therapy, the diagnosis of cholinergic crisis, according to Osserman and Genkins,[1] calls for the prompt *withdrawal* of all drugs of this type. The immediate use of atropine in cholinergic crisis is also recommended.

Atropine may also be used to abolish or obtund gastrointestinal side effects or other muscarinic reactions; but such use, by masking signs of overdosage, can lead to inadvertent induction of cholinergic crisis.

For detailed information on the management of patients with myasthenia gravis, the physician is referred to one of the excellent reviews such as those by Osserman and Genkins,[2] Grob[3] or Schwab.[4],[5]

Usage in Pregnancy: The safety of pyridostigmine bromide during pregnancy or lactation in humans has not been established. Therefore, use of pyridostigmine bromide in women who may become pregnant requires weighing the drug's potential benefits against its possible hazards to mother and child.

PRECAUTIONS

Pyridostigmine is mainly excreted unchanged by the kidney.[6],[7],[8] Therefore, lower doses may be required in patients with renal disease, and treatment should be based on titration of drug dosage to effect.[6],[7]

Pediatric Use: Safety and effectiveness in pediatric patients have not been established.

ADVERSE REACTIONS

The side effects of pyridostigmine bromide are most commonly related to overdosage and generally are of two varieties, muscarinic and nicotinic. Among those in the former group are nausea, vomiting, diarrhea, abdominal cramps, increased peristalsis, increased salivation, increased bronchial secretions, miosis and diaphoresis. Nicotinic side effects are comprised chiefly of muscle cramps, fasciculation and weakness. Muscarinic side effects can usually be counteracted by atropine, but for reasons shown in the preceding section the expedient is not without danger. As with any compound containing the bromide radical, a skin rash may be seen in an occasional patient. Such reactions usually subside promptly upon discontinuance of the medication.

DOSAGE AND ADMINISTRATION

Pyridostigmine bromide tablets, USP is available as

Conventional Tablets - each containing 60 mg pyridostigmine bromide.

Dosage: The size and frequency of the dosage must be adjusted to the needs of the individual patient.

Conventional Tablets - The average dose is ten 60 mg tablets, spaced to provide maximum relief when maximum strength is needed. In severe cases as many as 25 tablets a day may be required, while in mild cases one to six tablets a day may suffice.

Note: For information on a diagnostic test for myasthenia gravis, and for the evaluation and stabilization

of therapy, please see product literature on Tensilon®# (edrophonium chloride).

HOW SUPPLIED

Pyridostigmine Bromide Tablets USP, 60 mg having *functional scoring*. Pyridostigmine Bromide Tablets USP, 60 mg are white to off-white, round, flat, uncoated tablets with quadrisect breakline on one side and debossed with '659' on the other side and are supplied as follows:

NDC 65841-819-06 in bottles of 30 tablets

NDC 65841-819-16 in bottles of 90 tablets

NDC 65841-819-01 in bottles of 100 tablets

NDC 65841-819-05 in bottles of 500 tablets

Storage

Store at 20° to 25°C (68° to 77°F) [See USP Controlled Room Temperature]**.** Dispense in

original container.

IMPORTANT: These tablets are hygroscopic. Keep in a dry place with the silica gel enclosed.

REFERENCES

1. Osserman KE, Genkins G. Studies in myasthenia gravis: Reduction in mortality rate after crisis. *JAMA*. Jan 1963; 183:97-101.
2. Osserman KE, Genkins G. Studies in myasthenia gravis. *NY State J Med*. June 1961; 61:2076-2085.
3. Grob D. Myasthenia gravis. A review of pathogenesis and treatment. *Arch Intern Med*. Oct 1961; 108:615-638.
4. Schwab RS. Management of myasthenia gravis. *New Eng J Med*. Mar 1963; 268:596-597.
5. Schwab RS. Management of myasthenia gravis. *New Eng J Med*. Mar 1963; 268:717-719.
6. Cronnelly R, Stanski DR, Miller RD, Sheiner LB. Pyridostigmine kinetics with and without renal function. *Clin Pharmacol Ther*. 1980; 28:No. 1, 78-81.
7. Miller RD. Pharmacodynamics and pharmacokinetics of anticholinesterase. In: Ruegheimer E, Zindler M, ed. *Anaesthesiology*. (Hamburg, Germany: Congress; Sep 14-21, 1980; 222-223.) (Int Congr. No. 538), Amsterdam, Netherlands: Excerpta Medica; 1981.
8. Breyer-Pfaff U, Maier U, Brinkmann AM, Schumm F. Pyridostigmine kinetics in healthy subjects and patients with myasthenia gravis. *Clin Pharmacol Ther*. 1985;5:495-501.

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Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

Manufactured by:

Cadila Healthcare Ltd.

Baddi, India

Rev.: 06/15

Revision Date: 30/06/2015

PACKAGE LABEL.PRINCIPAL DISPLAY PANEL

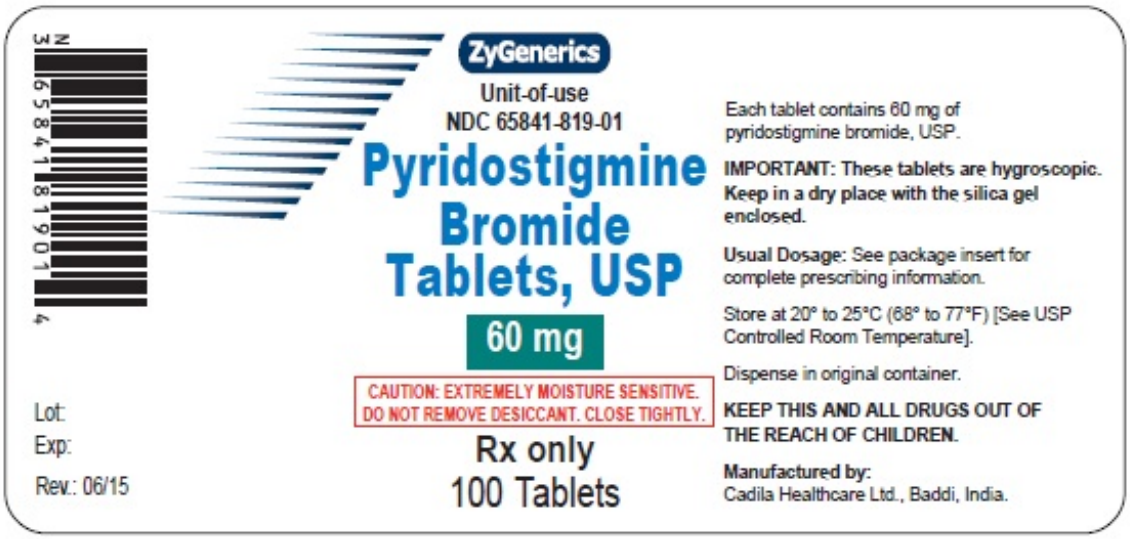
NDC 65841-819-01 in bottles of 100 tablets

Pyridostigmine Bromide Tablets USP, 60 mg

100 Tablets

Rx only

Zydus



PYRIDOSTIGMINE BROMIDE

pyridostigmine bromide tablet

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:65841-819
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
PYRIDOSTIGMINE BROMIDE (UNII: KVI301NA53) (PYRIDOSTIGMINE - UNII:19QM69HH21)	PYRIDOSTIGMINE BROMIDE	60 mg

Inactive Ingredients	
Ingredient Name	**Strength**
ANHYDROUS LACTOSE (UNII: 3SY5LH9PMK)	
HYDROXYPROPYL CELLULOSE, LOW SUBSTITUTED (UNII: 2165RE0K14)	
SILICON DIOXIDE (UNII: ETJ7Z6XBU4)	
STEARIC ACID (UNII: 4ELV7Z65AP)	

Product Characteristics			
Color	WHITE (white to off-white)	**Score**	4 pieces
Shape	ROUND	**Size**	10mm
Flavor		**Imprint Code**	659
Contains			

Packaging				
#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:65841-819-06	30 in 1 BOTTLE; Type 0: Not a Combination Product	08/07/2015	
2	NDC:65841-819-16	90 in 1 BOTTLE; Type 0: Not a Combination Product	08/07/2015	
3	NDC:65841-819-01	100 in 1 BOTTLE; Type 0: Not a Combination Product	08/07/2015	
4	NDC:65841-819-05	500 in 1 BOTTLE; Type 0: Not a Combination Product	08/07/2015	

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA205650	08/07/2015	

Labeler - Cadila Healthcare Limited (918596198)

Revised: 12/2019 Cadila Healthcare Limited