PRIOR AUTHORIZATION POLICY

POLICY: Parkinson's Disease – Inbrija™ (levodopa inhalation powder for oral inhalation use – Acorda)

DATE REVIEWED: 01/29/2020

OVERVIEW

Inbrija is indicated for the intermittent treatment of "off" episodes in patients with Parkinson's disease (PD) treated with carbidopa-levodopa.[1] Inbrija has been shown to be effective only in combination with carbidopa-levodopa. Levodopa, the metabolic precursor of dopamine, crosses the blood-brain barrier and is converted to dopamine in the brain. This is believed to be the mechanism whereby levodopa relieves symptoms of PD.

Inbrija should be taken when symptoms of an "off" period start to return.[1] The recommended dosage of Inbrija is 84 mg (two 42 mg capsules) as needed, up to five times daily. The maximum dose per "off" period is 84 mg, and the maximum daily dosage is 420 mg. Inbrija capsules are for oral inhalation only and should be used only with the Inbrija inhaler. Inbrija capsules must not be swallowed. Patients are instructed to load one capsule into the inhaler and breathe in; then remove the used capsule and load the second capsule into the inhaler and breathe in. The Inbrija inhaler is breath-actuated by the patient.

Disease Overview

PD is a common neurodegenerative disease and is a chronic, progressive disorder of the extrapyramidal nervous system affecting the mobility and control of the skeletal muscular system.[2,3] An estimated 50,000 Americans are diagnosed each year with PD and it is estimated that 1 million people in the US have the condition. PD typically affects patients who are greater than 60 years of age. Its characteristic features include resting tremor, rigidity, bradykinetic movements, and postural instability. As these symptoms become more pronounced, patients with PD may have difficulty walking, talking, or completing other simple tasks. Early symptoms of PD are subtle and occur gradually. The disease course varies considerably as well as the intensity of symptoms. While some patients become severely disabled, others experience only minor motor disruptions. Resting tremor is the major symptom for some individuals, while for others tremor is only a minor complaint and other manifestations may be more troublesome. It is not possible to predict which symptoms will affect an individual. PD symptoms are thought to be related to depletion of dopamine in the corpus striatum. Use of dopamine is ineffective in the treatment of PD because it does not penetrate the blood-brain barrier. However, levodopa, the metabolic precursor of dopamine, does cross the blood-brain barrier and is believed to be converted to dopamine in the brain. This is thought to be the mechanism whereby levodopa relieves PD symptoms. Other medications are also utilized to improve mobility.

Although initially effective, dopaminergic therapies are eventually complicated by motor fluctuations, including "off" time (periods during which PD symptoms return when the medication effect wears off) and dyskinesia (drug-induced involuntary movements, e.g., chorea and dystonia) in most patients.[4] These motor complications can impair patient quality of life and cause substantial disability. Risk factors for motor complications include younger age at the onset of PD, increased disease severity, higher levodopa dosage, and longer disease duration. These problems are often addressed with levodopa adjustments and the addition of adjunctive medications.

Guidelines

The American Academy of Neurology (AAN) published guidelines in 2006 regarding the treatment of PD with motor fluctuations and dyskinesia.[4] It should be noted that the guidelines are dated and do not include more recently-approved medications. The guidelines recommend offering entacapone and rasagiline to reduce "off" time (Level A). Pergolide (withdrawn from the market in 2007 due to risk of valvular fibrosis), pramipexole, ropinirole, and tolcapone (used with caution; requires monitoring for hepatotoxicity) should be considered to reduce "off" time (Level B). Apokyn® (apomorphine subcutaneous [SC] injection), cabergoline, and selegiline may be considered to reduce "off" time (Level C). According to the guidelines, the available evidence does not establish superiority of one medicine over another in reducing "off" time (Level B). Sustained-release carbidopa-levodopa and bromocriptine should not be considered to reduce "off" time (Level C). Amantadine may be considered to reduce dyskinesia (Level C). Deep brain stimulation of the subthalamic nucleus may be considered to improve motor function and reduce off time, dyskinesia, and medication usage (Level C). Preoperative response to levodopa predicts better outcome after deep brain stimulation of the subthalamic nucleus (Level B).

POLICY STATEMENT

Prior authorization is recommended for prescription benefit coverage of Inbrija. Because of the specialized skills required for evaluation and diagnosis of patients treated with Inbrija as well as the monitoring required for adverse events and long-term efficacy, initial approval requires Inbrija to be prescribed by or in consultation with a physician who specializes in the condition being treated. All approvals are provided for the duration noted below.

Automation: None.

RECOMMENDED AUTHORIZATION CRITERIA

Coverage of Inbrija is recommended in those who meet the following criteria:

FDA-Approved Indications

1. **Parkinson's Disease, Patients with "Off" Episodes.** Approve Inbrija for 1 year if patient meets the following (A, B, C, and D):
   - **A)** Inbrija is prescribed by or in consultation with a neurologist; AND
   - **B)** Patient is currently taking carbidopa-levodopa; AND
   - **C)** Patient has previously tried one other treatment for "off" episodes; AND
     Note: Examples of treatments for "off" episodes are entacapone, rasagiline, pramipexole, ropinirole, tolcapone, Apokyn, cabergoline, selegiline, or Xadago.
   - **D)** Patient does not have asthma, chronic obstructive pulmonary disease (COPD), or other chronic underlying lung disease.

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Inbrija has not been shown to be effective, or there are limited or preliminary data or potential safety concerns that are not supportive of general approval for the following conditions. Rationale for non-coverage for these specific conditions is provided below. (Note: This is not an exhaustive list of Conditions Not Recommended for Approval.)

1. Coverage is not recommended for circumstances not listed in the Recommended Authorization Criteria. Criteria will be updated as new published data are available.

REFERENCES

1. Inbrija™ powder for inhalation [prescribing information]. Ardsley, NY: Acorda Therapeutics, Inc.; December 2018.
2. Connolly BS, Lang AE. Pharmacological treatment of Parkinson disease. A review. *JAMA*. 2014;311(16):1670-1683.
3. National Institute of Neurological Disorders and Stroke (NINDS) Parkinson's disease information page. Last updated: August 28, 2019. Available at: https://www.ninds.nih.gov/Disorders/All-Disorders/Parkinsons-Disease-Information-Page. Accessed on January 27, 2020.
4. Pahwa R, Factor SA, Lyons KE, et al. Practice parameter: treatment of Parkinson disease with motor fluctuations and dyskinesia (an evidence-based review). Report of the quality standards subcommittee of the American Academy of Neurology. *Neurology*. 2006;66:983-995.