PRIOR AUTHORIZATION POLICY

POLICY: Parkinson's Disease – Duopa™ (carbidopa and levodopa enteral suspension – AbbVie)

APPROVAL DATE: 08/28/2019

OVERVIEW

Duopa, a combination of carbidopa (an aromatic amino acid decarboxylation inhibitor) and levodopa (an aromatic amino acid), is indicated for the treatment of motor fluctuations in patients with advanced Parkinson's disease (PD).[1] Duopa is administered over a 16 hour/day infusion period through a naso-jejunal tube (short-term administration) or a percutaneous endoscopic gastrostomy-jejunostomy (long-term administration) using a CADD-Legacy® 1400 pump. The daily dose is determined by individualized patient titration and composed of a morning bolus dose, a continuous dose, and extra doses. The clinical trial was a Phase III, randomized, double-blind, double-dummy, active-controlled, parallel-group, 12-week pivotal study of patients with advanced PD who were levodopa-responsive and had persistent motor fluctuations while on treatment with oral IR carbidopa-levodopa and other PD medications.[2] Eligible patients were > 30 years of age with advanced PD complicated by "off" periods which could not be satisfactorily controlled with optimized medical therapy (an adequate trial of carbidopa-levodopa, a dopamine agonist, and at least one other class of anti-parkinsonian therapy [catechol-O-methyltransferase {COMT} inhibitor or monoamine oxidase B {MAO-B} inhibitor]).

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.[3,4] 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. 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. Levodopa, the metabolic precursor of dopamine, crosses 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.

Guidelines

The American Academy of Neurology (AAN) published guidelines in 2006 regarding the treatment of PD with motor fluctuations and dyskinesia.[5] Of note, the guidelines have been retired by the AAN without a replacement report from the quality standards subcommittee. The guidelines recommend offering entacapone and rasagiline to reduce "off" time (Level A). Pramipexole, ropinirole, and tolcapone (used with caution; requires monitoring for hepatotoxicity) should be considered to reduce "off" time (Level B). Apokyn® (apomorphine subcutaneous injection), cabergoline, and selegiline may be considered to reduce "off" time (Level C). According to the guideline, ropinirole may be chosen over bromocriptine for reducing "off" time, but otherwise there is insufficient evidence to recommend one agent over the other (level B). Amantadine may be considered to reduce dyskinesia (Level C).

POLICY STATEMENT

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

Automation: None.

RECOMMENDED AUTHORIZATION CRITERIA

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

FDA-Approved Indications

1. **Parkinson's Disease.** Approve for 1 year if the patient meets the following criteria (A, B, C, D, and E):
   - **A)** The patient is diagnosed with advanced Parkinson's disease.
   - **B)** The patient is experiencing "off" episodes such as muscle stiffness, slow movements, or difficulty starting movements; AND
   - **C)** The patient has tried an oral extended-release carbidopa/levodopa therapy and meets one of the following criteria (i or ii):
     - **i.** Patient had unacceptable tolerability, according to the prescriber; OR
     - **ii.** Patient had inadequate efficacy, according to the prescriber; AND
   - **D)** Patient has previously tried three other treatments for "off" episodes; AND
     Note: Examples of treatment for "off" episodes include entacapone, rasagiline, pramipexole, ropinirole, tolcapone, cabergoline, selegiline, or Xadago.
   - **E)** Duopa is being prescribed by, or in consultation with, a neurologist.

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Duopa 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. Duopa™ [prescribing information] Bridgewater, NJ: Valeant Pharmaceuticals; August 2016.
2. Olanow CW, Kieburtz KK, Espay AJ, et al. Continuous intrajejunal infusion of levodopa-carbidopa intestinal gel for patients with advanced Parkinson's disease: a randomized, controlled, double-blind, double-dummy study. *Lancet Neurol*. 2014;13:141-149.
3. Connolly BS, Lang AE. Pharmacological treatment of Parkinson disease. A review. *JAMA*. 2014;311(16):1670-1683.
4. National Institute of Neurological Disorders and Stroke (NINDS) Parkinson's disease information page. Page last updated: March 27, 2019. Available at: https://www.ninds.nih.gov/Disorders/All-Disorders/Parkinsons-Disease-Information-Page. Accessed on June 12, 2019.

5. 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.