Levodopa + carbidopa

Essential medicine status

Section: 9. Antiparkinsonism medicines

ATC codes: N04BA02

Indication	Parkinson disease ICD11 code: 8A00.0Z
INN	Levodopa + carbidopa
Medicine type	Chemical agent
List type	Core
Formulations	Oral > Solid: 100 mg + 10 mg tablet ; 250 mg + 25 mg tablet ; 100 mg + 25 mg tablet
EML status history	First added in 1977 (TRS 615) Changed in 1979 (TRS 641) Changed in 1982 (TRS 685) Changed in 2003 (TRS 920) Changed in 2013 (TRS 985)
Sex	All
Age	Adolescents and adults
Therapeutic equivalence	Medicines within the same pharmacological class can be used
Therapeutic equivalence limitations	The square box applies only to carbidopa
Patent information	Patents have expired in most jurisdictions Read more about patents.
Wikipedia	Levodopa + carbidopa
DrugBank	Levodopa Carbidopa

Summary of evidence and Expert Committee recommendations

A new strength formulation of levodopa + carbidopa (100 mg + 25 mg) was added to the core list for the treatment of Parkinson disease. A review of EML section for antiparkinsonian medicines was considered by the Expert Committee in 2013. Parkinson disease is prevalent the world over. Life expectancy for patients with Parkinson disease in Europe was shown to be severely limited before the introduction of levodopa. That is essentially the situation that still exists in resource-constrained settings such as sub-Saharan Africa. Parkinson disease is prevalent the world over. Life expectancy for patients with Parkinson disease in Europe was shown to be severely limited before the introduction of levodopa. That is essentially the situation that still exists in resource-constrained settings such as sub-Saharan Africa. The current EML lists levodopa + carbidopa as 100 mg + 10 mg and 250 mg + 25 mg. Also listed is biperiden, an anticholinergic. Evidence shows that the risk of death was significantly reduced following the initiation of levodopa, regardless of pre-levodopa duration of Parkinson disease, and this reduction persisted over 17 years (1). Levodopa + carbidopa is the mainstay of therapy. The 10:1 ratio of levodopa:carbidopa that is listed is too high to prevent levodopa induced nausea for many patients. The 100 mg + 25 mg tablet with its 4:1 ratio is preferable for use for titration to the effective dose. Many guidelines and use data from the United Kingdom, for instance, support this statement. Patients are usually started on a 50 mg + 12.5 mg dose twice daily and gradually increased to 100 mg + 25 mg three times daily. The application reported that the current WHO listing was affecting availability of the correct formulation, especially in some African countries. The review mentioned other newer medicines for Parkinson disease, for use by clinicians with experience in treating this disease. Pramipexole and ropinirole are available in low- and middle-income countries but are expensive compared with levodopa/carbidopa. Selegiline, a monamine oxidase type B inhibitor, can be used both as initial and as add-on therapy. Amantadine has moderate antiparkinsonian

effects but has been found to be potentially helpful for dyskinesia. On the basis of the data presented, the Expert Committee decided to add the levodopa/carbidopa 100 mg + 25 mg dosage form, but decided to retain the 100 mg + 10 mg and 250 mg + 25 mg dosage forms as they were commonly used. 1. Uitti RJ, Ahlskog JE, Maraganore DM, Muenter MD, Atkinson EJ, Cha RH, et al. Levodopa therapy and survival in idiopathic Parkinson's disease: Olmsted County project. Neurology. 1993;43(10):1918-26. http://dx.doi.org/10.1212/WNL.43.10.1918 PMID:8413948