

Lopinavir/Ritonavir

Product:

LOPINAVIR/RITONAVIR (Kaletra®)
100mg/25mg pediatric tablet

Class of drugs:

Antiretroviral agent; protease inhibitor

Indication:

Treatment of HIV infection

Manufacturer:

Abbott Laboratories Ltd.

CED Recommendation

The CED recommended that lopinavir/ritonavir (Kaletra®) 100mg/25mg pediatric tablet be listed on the Ontario Drug Benefit (ODB) Formulary as a General Benefit for prescribers on the HIV Facilitated Access list. The CED's recommendation was made on the basis that this new formulation is as effective and safe as the 200mg/50mg adult tablet.

Executive Officer Decision

Based on the CED's recommendation and a subsequent listing agreement with the manufacturer, the Executive Officer decided to list lopinavir/ritonavir (Kaletra®) 100mg/25mg pediatric tablet on the ODB Formulary as a General Benefit for prescribers on the HIV Facilitated Access List.

Status

Funding is available through the Ontario Public Drug Programs.

Highlights of Recommendation:

- ◆ Lopinavir/ritonavir 100mg/25mg pediatric tablet is a new dosage of lopinavir/ritonavir, an anti-retroviral drug used to treat children weighing less than 40 kg who are infected with HIV-1.
- ◆ Other formulations of lopinavir/ritonavir are listed on the ODB Formulary as General Benefits for prescribers on the HIV Facilitated Access list. They include a 133mg/33.3mg soft gel capsule, a 80mg/20mg per mL oral solution, and a 200mg/50mg tablet. However, the 133mg/33.3mg soft gel capsule has now been discontinued.
- ◆ The film-coated pediatric tablets do not require refrigeration, do not need to be taken with food, and are easier for children to take because tablets taste better, compared to an oral solution of the same medication.
- ◆ **Overall, the Committee noted that lopinavir/ritonavir 100mg/25mg pediatric tablet is as effective, safe, and costs the same on a per-milligram basis as the lopinavir/ritonavir 200mg/50mg adult tablet.**

Background:

Human Immunodeficiency Virus (HIV) is the virus that causes acquired immunodeficiency syndrome (AIDS). Although there is no cure for HIV, antiretroviral drugs can help infected patients by bolstering their immune system, improving their quality of life and reducing HIV-related complications and death. Antiretroviral drugs work by lowering the amount of virus in the patient's blood (called the viral load).

Lopinavir/ritonavir contains two drugs that belong to a class called protease inhibitors. Protease inhibitors work by blocking an enzyme that the HIV virus requires to reproduce. Ritonavir increases the blood levels of lopinavir by interfering with its metabolism, resulting in higher and more sustained levels of lopinavir in the blood.

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Detailed Discussion:

- ◆ There are no randomized, controlled clinical trials (RCT) in pediatric population specifically for the pediatric formulation (100mg/25mg) of lopinavir/ritonavir. RCTs in children have been conducted with other formats of lopinavir/ritonavir.
- ◆ A pharmacokinetic study comparing pediatric tablet formulation (100mg/25mg) to adult formulation (200mg/50mg) in healthy adults demonstrated bioequivalence (i.e. the two different formulations are equally absorbed, distributed and metabolized in the body). This data can be applied to pediatric patients on the basis that absorption, distribution and metabolism would be the same in children as in adults.
- ◆ Lopinavir/ritonavir oral solution may have greater dosage variability than the tablet format and the unpleasant taste is a concern in children.
- ◆ Lopinavir/ritonavir tablets do not need to be refrigerated and do not need to be taken with food.
- ◆ Side-effects reported during clinical trials include abdominal pain, abnormal bowel movements, diarrhea, fatigue, weakness, headache, nausea, vomiting and skin rash.
- ◆ The price of lopinavir/ritonavir 100mg/25mg pediatric tablet is half that of the 200mg/50mg adult tablet and is thus the same price on a per-milligram basis. The pediatric tablet is also comparable or less costly on a daily basis than the soft gel capsule and oral solution.
- ◆ **Overall, the Committee felt lopinavir/ritonavir pediatric tablet is bioequivalent to the adult tablets. The tablet formulation offers the advantages of masking unpleasant taste, does not require refrigeration or consumption with food, and is less expensive than the lopinavir/ritonavir soft gel capsule and oral solution on a per-milligram basis.**

CEDAC Recommendation:

<http://www.cadth.ca/index.php/en/cdr/recommendations>

The Canadian Expert Drug Advisory Committee (CEDAC) did not review this product.



Ministry of
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