Background Summary

Is lopinavir/ritonavir (Kaletra) an effective treatment for COVID-19?

Evidence Syntheses

As of June 3, 2020, **no high-quality evidence syntheses support the use of lopinavir/ritonavir as a treatment for COVID-19.**

Source	Title	Date	Link	Conclusions (emphasis added)
CEBM	Lopinavir/ritonavir: A rapid review of effectiveness in COVID-19	April 14, 2020	Link	"There is currently **no strong evidence** for the efficacy of lopinavir/ritonavir in the treatment of COVID-19. Overall, the limited studies identified were subject to methodological flaws. Several ongoing trials of lopinavir/ritonavir are currently recruiting."
No relevant evidence syntheses were found in Cochrane or JBI.				

Clinical Trials

As of June 3, 2020**, no clinical trials support the use of lopinavir/ritonavir as a treatment for COVID-19**. There are many ongoing clinical trials, including two in Canada besides CO-VIC.

MEDLINE

# trials in major journals, published since last evidence synthesis (April 14, 2020)	2

Find these trials in PubMed: 32187464 32401715

Ongoing Trials on ClinicalTrials.gov

# ongoing trials listing lopinavir/ritonavir as a primary treatment	21

Canadian trials (other than CO-VIC):

Treatments for COVID-19: Canadian Arm of the SOLIDARITY Trial (CATCO); sites in Edmonton, Vancouver, Victoria, Ottawa, Toronto, Montreal, Quebec City, and Sherbrooke

COVID-19 Ring-based Prevention Trial With Lopinavir/Ritonavir (CORIPREV-LR); sites in Vancouver and Toronto

STUDY SPOTLIGHT

Cao B, Wang Y, Wen D, et al. **A Trial of Lopinavir–Ritonavir in Adults Hospitalized with Severe Covid-19.** N Engl J Med. 2020;382(19):1787-1799. doi:10.1056/NEJMoa2001282 [link]

Summary

- Open-label, individually randomized, controlled trial
- Site: Jin Yin-Tan Hospital, Wuhan, Hubei Province, China
- Enrollment Jan 18 – Feb 3, 2020
- 1:1 ratio to receive either lopinavir–ritonavir (400 mg and 100 mg, orally) twice daily, plus standard care, or standard care alone, for 14 days
- Patients assessed once daily by trained nurses using diary cards that captured data on a 7-category ordinal scale and on safety from day 0 – day 28, hospital discharge, or death
- Primary end point = time to clinical improvement, defined as improvement of 2 points on a 7-category ordinal scale or live discharge from the hospital, whichever came first
- 199 patients enrolled; 99 treatment / 100 control
- Suspended enrollment once remdesivir became available for trials

Conclusions

No benefit observed.

- No acceleration in clinical improvement
- No reduction in mortality
- No diminishment in throat viral RNA detectability

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Search Methods

MEDLINE

Date searched: 2020-06-01

Search string: (kaletra or lopinavir or lopimune or aluvia or alluvia or lpv*).ti,ab.

COVID-19 filter: MEDLINE built-in

Major journals filter: (cmaj or jama or n engl j med or lancet or science or nature or bmj or ann intern med or plos one).ja.

ClinicalTrials.gov / Preprints

Date searched: 2020-06-01

Preprints searched through Seton Hall University Interprofessional Health Sciences Library's Preprint Servers Custom Search: https://library.shu.edu/COVID19_elective/resources

Search string: kaletra OR lopinavir OR lopimune OR aluvia OR alluvia OR lpv*

Please note: This summary is not being kept up to date, and reflects evidence up to and including June 3, 2020 only.