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## Arbidol combined with LPV/r versus LPV/r alone against Corona Virus Disease 2019: A retrospective cohort study

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### Abstract

**Background:** Corona Virus Disease 2019 (COVID-19) due to the 2019 novel coronavirus (SARS-CoV-2) emerged in Wuhan city and rapidly spread throughout China. We aimed to compare arbidol and lopinavir/ritonavir (LPV/r) treatment for patients with COVID-19 with LPV/r only.

**Methods:** In this retrospective cohort study, we included adults (age  $\geq 18$  years) with laboratory-confirmed COVID-19 without invasive ventilation, diagnosed between Jan 17, 2020, and Feb 13, 2020. Patients, diagnosed after Jan 17, 2020, were given oral arbidol and LPV/r in the combination group and oral LPV/r only in the monotherapy group for 5-21 days. The primary endpoint was a negative conversion rate of coronavirus from the date of COVID-19 diagnosis (day 7, day 14), and assessed whether the pneumonia was progressing or improving by chest CT (day 7).

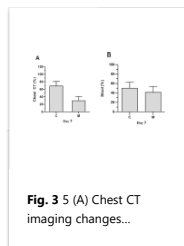
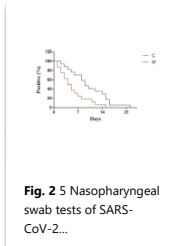
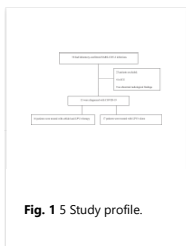
**Results:** We analyzed 16 patients who received oral arbidol and LPV/r in the combination group and 17 who oral LPV/r only in the monotherapy group, and both initiated after diagnosis. Baseline clinical, laboratory, and chest CT characteristics were similar between groups. The SARS-CoV-2 could not be detected for 12 (75%) of 16 patients' nasopharyngeal specimens in the combination group after seven days, compared with 6 (35%) of 17 in the monotherapy group ( $p < 0.05$ ). After 14 days, 15 (94%) of 16 and 9 (52.9%) of 17, respectively, SARS-CoV-2 could not be detected ( $p < 0.05$ ). The chest CT scans were improving for 11 (69%) of 16 patients in the combination group after seven days, compared with 5 (29%) of 17 in the monotherapy group ( $p < 0.05$ ).

**Conclusion:** In patients with COVID-19, the apparent favorable clinical response with arbidol and LPV/r supports further LPV/r only.

**Keywords:** Antiviral intervention; Arbidol; Combination therapy; Corona Virus Disease 2019; Lopinavir/ritonavir.

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### Figures



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> COVID-19

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