

# Perbandingan Tingkat Kesembuhan Covid-19 Terhadap Remdesivir dan Favipiravir Berdasarkan CRP, Viral Clearance dan Ratio Neutrofil Limfosit = Comparison of critical COVID-19 recovery rates against Remdesivir and Favipiravir based on CRP, Viral Clearance and Neutrophil Lymphocyte Ratio : a retrospective study

Lillah Fitri, author

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## Abstrak

**Latar Belakang:** Penatalaksanaan klinis pada pasien COVID-19 mencakup tindakan pencegahan dan pengendalian infeksi serta perawatan suportif termasuk oksigen tambahan dan dukungan ventilasi mekanis. Pemberian terapi antivirus diharapkan dapat mengurangi tingkat keparahan dan mortalitas. Di antara terapi antivirus yang diberikan, favipiravir dan remdesivir merupakan terapi antivirus untuk pasien dewasa dengan COVID-19 derajat berat atau kritis yang direkomendasikan pemberiannya menurut Protokol Tata Laksana COVID-19. Tujuan dari penelitian ini adalah membandingkan tingkat kesembuhan pasien COVID-19 yang diterapi dengan remdesivir dan favipiravir ditinjau dari CRP, viral clearance, dan NLR.

**Metode:** Penelitian ini merupakan penelitian observasional dengan desain kohort retrospektif. Kelompok yang mendapat paparan terapi antivirus favipiravir dan kelompok yang mendapat paparan terapi antivirus remdesivir diikuti sampai terjadinya outcome. Data yang akan digunakan adalah data sekunder dari rekam medis pasien COVID-19 yang dirawat di ruang Intensif Care Unit (ICU) dan High Care Unit (HCU) RSUD Tarakan dengan pemeriksaan RT-PCR positif berusia minimal 18 tahun yang mendapat terapi antivirus remdesivir dan favipiravir pada bulan April 2020 – September 2021. Uji statistik menggunakan chi square yang dilanjutkan dengan uji regresi logistik untuk menilai secara multivariat jika memenuhi persyaratan.

**Hasil:** Pada penelitian ini didapat hubungan bermakna antara antivirus yang digunakan pasien COVID-19 dengan tingkat kesembuhan (OR 0,384; CI 95% = 0,234 – 0,606). Tingkat kesembuhan lebih baik berdasarkan CRP adalah 35,5% pada remdesivir dan 51,4% pada favipiravir (OR 0,690; CI 95% = 0,525-0,907), berdasarkan RNL adalah 14,2% pada remdesivir dan 41,1% pada favipiravir (OR 0,345; CI 95% = 0,220 – 0,541) dan berdasarkan viral clearance adalah 20 hari pada remdesivir dan 21 hari pada favipiravir untuk virus tidak lagi terdeteksi (OR 1,79; CI 95% = 0,804-1,730).

**Kesimpulan :** Tingkat kesembuhan lebih baik sebesar 14,2% pada kelompok remdesivir dibandingkan kelompok favipiravir yang sembuh lebih baik sebesar 37%. Remdesivir memberikan tingkat kesembuhan sebesar 0,384 kali lebih baik dari favipiravir.

.....Background: Clinical management of COVID-19 patients includes infection prevention and control measures as well as supportive care including supplemental oxygen and mechanical ventilation support. Giving antiviral therapy is expected to reduce the severity and mortality. Among the antiviral therapies given, favipiravir and remdesivir are antiviral therapies for adult patients with severe or critically ill COVID-19 that are recommended according to the COVID-19 Management Protocol. This study aims to compare the cure rates of COVID-19 patients treated with remdesivir and favipiravir in terms of CRP, viral

clearance, and NLR.

**Methods:** This study is an observational study with a retrospective cohort design. The group exposed to antiviral therapy with favipiravir and the group exposed to antiviral therapy remdesivir were followed until the outcome. The data to be used is secondary data from medical records of COVID-19 patients treated in the intensive care unit (ICU) and High Care Unit (HCU) of Tarakan Hospital with positive RT-PCR examination aged at least 18 years who received antiviral therapy remdesivir and favipiravir in April 2020 – September 2021. Admission criteria included patients aged at least 18 years who had confirmed COVID-19 with positive RT-PCR who were receiving remdesivir or favipiravir therapy. Exclusion criterias were pregnancy and breastfeeding. Statistical test using chi square followed by logistic regression test to assess multivariately if it meets the requirements.

**Result:** In this study, there was a significant relationship between the antiviral used by COVID-19 patients and the recovery rate (OR 0,384; 95% CI = 0,234 – 0,606), The better recovery rate based on CRP was 35.5% for remdesivir and 51.4% for favipiravir (OR 0.690; 95% CI = 0.525-0.907), based on RNL was 14.2% for remdesivir and 41.1% for favipiravir ( OR 0.345; 95% CI = 0.220 – 0.541) and based on viral clearance, it took 20 days on remdesivir and 21 days on favipiravir for virus no longer detectable

**Conclusion:** There was a significant relationship of the recovery rate in the two antiviral groups. The recovery rate for COVID-19 was better by 14.2% in the remdesivir group compared to the favipiravir group which recovered better by 37%. Remdesivir provides a recovery rate of 0,384 times better than favipiravir.