

Effect of remdesivir post hospitalization for COVID-19 infection from the randomized SOLIDARITY Finland trial

Received: 1 June 2022
 Accepted: 4 October 2022
 Published online: 18 October 2022
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Full article published on 18 Oct 2022 in *Nature Communications*, available at <https://www.nature.com/articles/s41467-022-33825-5>

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Funding

The Academy of Finland (335527), Foundation of the Finnish Anti-Tuberculosis Association, Helsinki University Hospital (TYH2022330), Päivikki and Sakari Sohlberg Foundation, Sigrid Jusélius Foundation, Tampere Tuberculosis Foundation, and Tampere University Hospital State Research Funding (9AC085) funded this study. World Health Organization (WHO) provided the study drug (remdesivir), donated by Gilead Sciences. The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and the decision to submit the manuscript for publication.



Effect of Remdesivir on Recovery, Quality of Life, and Long-COVID Symptoms One Year after Hospitalization for COVID-19 Infection: A Randomized Controlled SOLIDARITY Finland Trial

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Objective

- COVID-19 patients frequently suffer from long-term sequelae, often called “long COVID” or “post COVID-19 condition”
- No randomized trials have thus far published long-term follow-up data on any COVID-19 drug treatment
- We investigated the effects of remdesivir on a range of patient-important outcomes at one year

Methods

- Between 07/2020-01/2021, an open-label randomized trial recruited 208 adult patients from 11 Finnish hospitals
- Patients randomly assigned to standard of care (SoC) with remdesivir (median remdesivir treatment 5 days) or SoC alone
- Primary outcomes: i) self-reported recovery, ii) exertional dyspnea, iii) fatigue, and iv) quality of life at one year
- Secondary outcomes: i) overall mortality and ii) several potential long-COVID symptoms

Results

- At 1 year, 4.4% of remdesivir and 5.3% SoC group had died (RR 0.82, 95% CI 0.25-2.76)
- 181 (92% of survivors) completed the follow-up
- Self-reported recovery (fully or largely) occurred in 85% in remdesivir and in 86% in SoC (RR 0.94, 0.47-1.90) (Table)
- Exertional dyspnea occurred in 5% in remdesivir and 8% in SoC (RR 0.61, 95% CI 0.20-1.85)
- No convincing difference between remdesivir and SoC groups in quality of life or symptom outcomes
- Of the 21 potential long-COVID symptoms, patients often reported moderate/major bother from fatigue (26%), joint pain (22%), persistent respiratory mucus (21%), and problems with memory (19%) and attention/concentration (18%) (Figure)

Conclusions

- After a 1-year follow-up of hospitalized patients (with a very high participation rate), approximately 1 in 6 reported that they had not recovered well from COVID-19, and 1 in 4 reported substantial bother from fatigue
- We found no convincing evidence of a remdesivir effect, but confidence intervals were wide and included possible substantial benefit and substantial harm

Table. Effect of remdesivir (n=98) plus SoC (n=83) compared to SoC only after 1 year from hospitalization due to COVID-19-infection

Outcome	Remdesivir, n (%)	SoC, n (%)	RR, 95% CI
How do you feel you have recovered from the COVID-19 infection you had a year ago?			0.94, 0.47-1.90
- Fully or largely (1-2)	83 (84.7)	71 (85.5)	
- About halfway recovered to not recovered at all (3-5)	15 (15.3)	12 (14.5)	
Exertional dyspnea, mMRC dyspnea scale			0.61, 0.20-1.85
- No to slight dyspnea (mMRC 0-1)	92 (93.9)	76 (91.6)	
- At least a need to walk slower than usually (mMRC 2-4)	5 (5.1)	7 (8.4)	
- Excluded (paralyzed before COVID-19)	1	0	
Fatigue			0.88, 0.54-1.44
- No or slight fatigue (1-2)	74 (75.5)	60 (72.2)	
- Moderate or severe fatigue (3-4)	24 (24.5)	23 (27.7)	
Mobility, walking (EQ-5D-5L)			1.03, 0.54-1.96
- No or slight problems (1-2)	81 (82.7)	69 (83.1)	
- From moderate problems to unable to walk (3-5)	17 (17.3)	14 (16.9)	
Self-care, washing or dressing oneself (EQ-5D-5L)			0.51, 0.13-2.08
- No or slight problems (1-2)	95 (96.9)	78 (94.0)	
- From moderate problems to inability to wash or dress (3-5)	3 (3.1)	5 (6.0)	
Usual activities, e.g., work, study, housework, family or leisure activities (EQ-5D-5L)			0.71, 0.32-1.55
- No or slight problems (1-2)	88 (89.8)	71 (85.5)	
- From moderate problems to inability to do usual activities (3-5)	10 (10.2)	12 (14.5)	
Pain or discomfort (EQ-5D-5L)			0.85, 0.44-1.63
- No or slight pain (1-2)	83 (84.7)	68 (81.9)	
- From moderate to extreme pain (3-5)	15 (15.3)	15 (18.1)	
Anxiety or depression (EQ-5D-5L)			1.27, 0.47-3.42
- No or slight problems (1-2)	89 (90.8)	77 (92.8)	
- From moderate to extreme problems (3-5)	9 (9.2)	6 (7.2)	

Figure. Bother from potential long-COVID symptoms at 1 year from COVID-19 hospitalization between remdesivir plus SoC and SoC only

RDV stands for remdesivir plus standard of care, and SoC for standard of care

