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COVID-19 and "The Remdesivir Crosslet"

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Abstract: ***Remdesivir has made an alleged comeback (with or without baricitinib) with the dawn of new COVID-19 strains internationally but back here in India it always was supposedly effective. However, not many studies could be published in support of the same (and thus the use of 'supposedly' apropos) from India given the confusing and changing guidelines world-around. Nevertheless, this article emphasizes the fact (by reporting cases of success) that remdesivir sure is effective albeit with the rider being the "timing" which we imagine as an 'appearance of a crosslet' in the fort of COVID-19.***

Keywords: COVID-19, remdesivir

1. Introduction

Remdesivir inhibits RNA dependant RNA polymerase and eventual viral replication (1). Its suggested use is in a confirmed COVID-19 (RTPCR positive) case requiring oxygen, though not via High Flow Nasal Cannula or from any form of mechanical ventilation or Extra Corporeal Membrane Oxygenation. However, uncertainty is regarding the timing of drug initiation.

We propose that the drug be used as an arrow shot through a window (we call which "a crosslet" - an opening in a castle wall for a tactical strike), one that appears during the illness as a potential harbinger of a remarkable clinical response. Knowledge hitherto states, the disease subsets not requiring or those requiring a high amount of oxygen do not benefit despite Remdesivir (2, 3, 4).

Thus we shot Remdesivir through the crosslet that appeared within five days from the onset of dyspnoea, where indicated. The existence of this crosslet was herald by worsening oxygen requirement (respiratory rate between 24-30 per min and finger SpO2 90 to 94% on room air).

After obtaining written consent and following the literature there is, injection Remdesivir was loaded(200mg IV over 2hrs) on day one and then followed up with 100mg once for four days for all of our nine patients (1,5).

Where the drug was fired through the crosslet (five out of nine cases), we noted 95-100% subjective improvement and no oxygen requirement within two days of drug delivery. The fact that all patients were Asians (Indians), counters the preliminary report on Remdesivir calling for further research to establish the same (1).

In cases where our crosslet was missed, the response was far from satisfying. This included those (02 cases) who received the drug starting from 5th to 7 of dyspnoea (had only 70-90% subjective improvement, did not desaturate on room air albeit felt better when on oxygen) and those (02 cases) who received it after 7 days (consistently failed the 03min walk test and the intermittent oxygen requirement lingered on).

Of note, there were no serious adverse effects reported by any of the cases. Occasional minimal transaminitis resolved regardless of the continued drug.

In conclusion, the bewildering data on the time of initiation of the drug can be done away with as the novel coronavirus is surely seen beating a hasty retreat when a hit is taken off "The Remdesivir crosslet", nonetheless with support of further trials.

Data enclosed as Appendix 'A' – The Observations

Conflict of Interest – None to declare by any author

Financial association – None

References

[1] Beigel JH, Tomashek KM, Dodd LE, et al. Remdesivir for the treatment of COVID-19—preliminary report. N Engl J Med. 2020
[2] World Health Organization. Clinical Management of COVID 19 interim guidance. May 27, 2020. WHO/2019-nCoV/clinical/2020.5 (https://www.who.int/publications/i/item/clinical-management-of-covid-19)
[3] National Institutes of Health. Coronavirus disease 2019 (COVID-19) treatment guidelines. April 21, 2020 (https://www.covid19treatmentguidelines .nih .gov/)
[4] Siddiqi HK, Mehra MR. COVID-19 illness in native and immunosuppressed states: a clinical-therapeutic staging proposal. J Heart Lung Transplant 39: 405–407, 2020
[5] Goldman JD, Lye DCB, Hui DS, et al. Remdesivir for 5 or 10 days in patients with severe COVID-19. N Engl J Med. 2020

Appendix 'A'

The Observations

S. No.	Age	Sex	Co-Morbidities	Symptom to drug time	RR(/min) and SpO2(%) before therepy	RR(/min) and SpO2(%) after therapy	ADR(TB/DB mg%//OT/PT IU/L)	Subjective Improvement	Remarks
1.	55	M	-	d13	25, 88	18,94	(D1)1.1/0.4//36/40→(D2)0.6/0.1/40/99 →(D5)0.4/0.1/38/46 →(D6) 0.4/0.1/15/42	60%	a)Failed 3min walk test post-therapy b)**CXR** – bilateral peripheral opacities involving < 50% **CT CHEST (CIVIL,13/09/20)-** interstitial pneumonia with bronchiectasis
2.	57	M	-	d8	25,88	15,95	(D1)1.0/0.1//66/83→(D2)0.6/0.1//80/216→(D5) 0.5/0.1/40/131→ (D6) 0.5/0.1/25/108	75%	a) Failed 3min walk test despite therapy b)Transaminitis resolved during treatment c)**CTCHEST (CIVIL,13/09/20)-** Extensive GGOs & patchy consolidation with peripheral & basal predominance involving all lobes of bilateral lungs – possibility viral pneumonia CT Score -14/25
3.	36	M	-	d3	26,92	12,98	(D1)0.9/0.2/35/41→(D2)0.9/0.2//35/41→(D3) 0.4/0.1/31/66→(D5)--/--/31/66	100%	a)**CXR-** bilateral peripheral opacities involving < 50%
4.	54	M	-	d2	26, 88	18,97	(D1)1.4/0.2//83/66→(D3)0.5/0.1//100/81→(D6) 0.3/0.1//51/87	100%	a)Transaminitis noted on d3 of drug which had a reducing trend b)**CXR -** bilateral peripheral opacities involving < 50%
5.	31	M	-	d1	24, 88	14,99	(D4)0.3/0.1//40/121→(D5) 0.4/0.1/72/113	95%	a)Transaminitis resolved during the course of treatment. b)**CT CHEST (civil,26/09/20)** – Multiple irregular areas of air space opacifications in both lungs CT Severity score – 22/40 CORADS - 5
6.	54	M	Varicose veins left leg	d4	22, 92	16, 92	(D2)1.1/0.1/54/22→(D3)0.7/0.1//97/93→(D4)0.5/0.1//60/114	70-80%	a)Transaminitis resolved during the course of treatment b)**HRCT CHEST (civil,25/09/20)** – Subpleural GGOs involving all lobes of both lungs
7.	65	M	T2DM, HTN, IPD, BPH	d5	23/86	12,94	(D1)0.7/0.1//36/52→(D2)0.5/0.2//25/30→(D3)0.6/0.2//22/28→(D4)0.6/0.1//46/38→(D6)0.6/0.1//50/29	90%	a)**HRCT CHEST (Civil, 06/09/20)** – CORADS – 5 CT Severity score – 14/25
8.	55	M	T2DM	d 7	24/80	22/96	(D1) 0.7/0.5/40/30→(D5)0.3/0.1//14/20	60%	a)Failed 3min walk test despite therapy b) **CT CHEST (SMT KASHIBA MEDICAL COLLEGE, 29/09/20)** – Multiple abnormal areas of patchy GGOs with smooth interstitial septal thickening

									diffusely involving bilateral lungs CT Severity Score – 20 CORADS – 6. He failed the
9.	70	F	-	d 6	26/60	23/82	(D1)0.7/0.2/44/25→ (D4)0.5/0.2/48/22→(D7) 2.2/0.3/26/21	70-80%	**CXR** – Bilateral peripheral opacities involving < 50%

***Key:- d** - Day from the onset of dyspnoea; **D** – Day from the start of remdesivir, CXR – Chest X-Ray PA, RR- Respiratory rate, ADR –Adverse Drug Reaction