COVID 19 has become a household name in a short span of 1 year. We have probably seen other such illness shot into fame, such as SARS CoV-1, MERS, to name a few, but none have matched the name and fame which COVID 19 (SARS Cov-2) has achieved. It continues to draw attention by all people alike, irrespective of cast, creed, religion, or profession.

As we dawn into the year 2 of this illness, we have seen major trials pertaining to treatment and vaccination for the illness. The rapid progress in science and technology has made us develop and repurpose drugs which were there for other illness. It is commendable to see how the medical fraternity and the pharmaceutical industry have combined and come forth with innovations which in normal circumstances take a decade or so.

Various studies have looked into the role of antiviral therapies for use in COVID-19, but a major limitation with all has been a lack of long-term follow-up, as is expected. Remdesivir was first identified as an investigational drug to treat Ebola virus disease during the West African outbreak in 2013–2016.\(^1\) Given the mechanism of action of remdesivir as an antiviral that halts viral replication, these trial findings support the use of remdesivir in the early active viral replication phase in COVID-19 polymerase chain reaction-positive patients. If patients progress from the viral replication phase to the inflammatory phase of infection, such as patients with acute respiratory distress syndrome requiring ventilation, remdesivir is not effective and anti-inflammatory drugs may be beneficial.

Remdesivir has emerged as one of the initial drugs for the use against SARS CoV-2 infection and is touted as the “molecule of hope.” The initial data showed a decrease in the duration of illness and proven safety profile lead to its rapid approval for emergency use by the US Food and Drug Administration. The interim results in the Solidarity trial in the investigational drug arms led to major confusion as to whether to use the drug or not as there to be seemed no mortality benefit as well reduction in the need for ventilation.\(^2\) The various other trials showed a decrease in hospital stay and or reduction in the illness,\(^3\) which is a major benefit if one would see as also has been highlighted by the authors in their article. The safety profile of the drug and the reduction in duration of illness would benefit by leading to a reduction in load on the already strained health-care system, as has been highlighted by the article on “Placing the results of the SOLIDARITY trial with regards to remdesivir in perspective.” The timing of the drug and patient selection are the two most important factors in seeing the response of an antiviral drug. Delay in the use of antiviral drugs and use in severe disease would be of no benefit to the patient.

In a study by Beigel \textit{et al.}, remdesivir was superior to placebo in shortening the time to recovery in adults who were hospitalized with Covid-19 and had evidence of lower respiratory tract infection.\(^3\)

In hospitalized patients with COVID-19, remdesivir probably results in little to no mortality difference but probably improves the percentage recovered and reduces serious harms and may result in a small reduction in the proportion receiving ventilation.\(^4\) These things have been highlighted in the perspective by the authors of the article appropriately.

At present, remdesivir remains an investigational drug for the treatment of COVID-19. Although it is associated with shorter hospital length of stay, and a more rapid clinical convalescence, no mortality benefit has been demonstrated. These results do not provide clear evidence on the efficacy and safety of remdesivir against COVID-19. It has been suggested that remdesivir is unlikely to achieve adequate concentration in lung tissues through intravenous infusion alone because of its low tissue distribution and poor lung penetration.\(^5\) A proposed combination of pulmonary and intravenous administration of remdesivir has been suggested for a more effective strategy for the treatment of COVID-19.

We have to agree that the establishment of the role of remdesivir across the disease spectrum of COVID-19 requires more studies comparing different treatment strategies and/or routes of administration like combination of antiviral therapy with immune-modulatory agents, particularly in severe COVID-19 disease, are needed.

At present, the only hope we have is in the form of this drug and we should use it at the right time and in the right population for the desired results till the time we get a magic bullet to target our opponent.

As someone has said “Be strong now, because things will get better. It may be stormy now but it can’t rain for ever.”

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REFERENCES

1. Lin HX, Cho S, Aravamudan VM, Sanda HY, Palraj R, Molton JS., et al. Remdesivir in Coronavirus Disease 2019 (COVID-19) treatment: A review of evidence. Infection 2021;1-10. doi: 10.1007/s15010-020-01557-7.

2. WHO Solidarity Trial Consortium, Pan H, Peto R, Henao-Restrepo AM, Preziosi MP, Sathiyamoorthy V, et al. Repurposed antiviral drugs for Covid-19-Interim WHO solidarity trial results. N Engl J Med 2021;384:497-511.

3. Beigel JH, Tomashek KM, Dodd LE, Mehta AK, Zingman BS, Kalil AC, et al. Remdesivir for the treatment of Covid-19 - Final report. N Engl J Med 2020;383:1813-26.

4. Kaka AS, MacDonald R, Greer N, Vela K, Duan-Porter W, Obley A, et al. Major Update: Remdesivir for adults with COVID-19: A living systematic review and meta-analysis for the American College of Physicians Practice Points. Ann Intern Med 2021;M20-8148. doi: 10.7326/M20-8148.

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