Remdesivir

Update to:

Chapter 48: Miscellaneous Antivirals (Interferons, Imiquimod, Pleconaril)

Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, Ninth Edition (Elsevier, 2020)

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Remdesivir received emergency use authorization (EUA) from the FDA on May 1, 2020 for treatment of hospitalized patients with COVID-19.[1] The EUA was based on the results of a placebo-controlled trial in 1,063 patients hospitalized at world-wide centers. Recovery time from illness was reduced by 31% in remdesivir recipients (11 days) compared to placebo recipients (15 days) ($P< 0.001$). A trend for a reduction in mortality was seen in remdesivir recipients (8%) compared to placebo recipients (11.6%) ($P<0.059$).[2] Results from a separate, drug company supported trial involving 397 patients, indicated that 5 days of therapy was as effective as 10 days.[3]

A recently published, smaller trial of 237 patients conducted in China did not show a significant difference in time to clinical improvement for remdesivir recipients (21 days) compared to placebo recipients (23 days).[4] No significant differences in mortality rates or in virus loads were observed in the study. Overall, therapy was described as well tolerated.

Additional laboratory studies further elucidated the mechanism of action of remdesivir against SARS-CoV-2. Remdesivir is covalently incorporated into the primer strand of the virus RNA-dependent RNA polymerase, which results in termination of chain elongation.[5]

References

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