Ivermectin in Severe COVID-19 Pneumonia: Triple Therapy (Remdesivir, Convalescent Plasma and Ivermectin) vs Double Therapy (Remdesivir and Convalescent Plasma) – A Propensiy Score Matching Study

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Introduction: Remdesivir has been shown to be effective in treating patients with moderate coronavirus disease 2019 (COVID-19). The effect of triple therapy with remdesivir, convalescent plasma and ivermectin in severe COVID-19 is unknown.

Methods: We conducted a retrospective, single-site observational study evaluating triple therapy (remdesivir, convalescent plasma, ivermectin) versus double therapy (remdesivir and convalescent plasma) in hospitalized patients with COVID-19 (PCR test-positive). The primary outcome was mortality, and the secondary outcome was the length of stay (LOS).

Results: 151 patients were identified. 121 patients received triple therapy (control) and 30 patients received double therapy (15 patients each according to propensity score matching). 30 patients were identified. 121 patients received triple therapy (control) and 30 patients received double therapy (15 patients each according to propensity score matching). The mean age of the 121 patients was 53.2 years, and 72 (60% of patients) were male. Among the 30 patients who received double therapy, 15 (50%) died compared to 26 (22% of patients) in the control group. This difference was not statistically significant (p = 0.327).

Discussion: The mechanism of action of remdesivir targets viral entry, and so it only works if given very early on in the disease. It may not work if given several days after patients start having symptoms. In contrast, both convalescent plasma and ivermectin work by neutralizing the virus and so are effective in treating patients who are already sick. The combination of these two treatments may work synergistically to improve outcomes in severe COVID-19 patients. Further studies are needed to confirm these findings.