PS05.04 (947)Treatment with Ivermectin Is Associated with Decreased Mortality in COVID-19 Patients: Analysis of a National Federated Database

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Purpose

To evaluate the difference in mortality of patients treated with ivermectin vs patients treated with remdesivir with COVID-19 in United States using TriNetX Research network, a federated EMR network of over 44 healthcare organizations and 68 million patients from US, from 2009-2021.

Methods & Materials

We retrospectively identified adults (≥18 years) with a recorded COVID-19 infection between January 1, 2020 and July 11, 2021. We compared those with recorded use of ivermectin, but not remdesivir, against those with recorded use of remdesivir, but not ivermectin. We controlled for the following demographics, comorbidities, and treatments that may affect COVID-19 survival outcomes: age, gender, race, ethnicity, nicotine use diabetes mellitus, obesity, chronic lower respiratory disease, ischemic heart diseases, tocilizumab, glucocorticoids, or ventilator use. We measured association with mortality as the primary outcome, with significance assessed at p<0.05.

Results

There were a total of 1,761,060 possible COVID-19 patients based on ICD-10 diagnostic terms and confirmatory lab results. Prior to controlling, our analysis yielded 41,608 patients who had COVID-19 resulting in two unique cohorts that were treated with either ivermectin

(1,072) or remdesivir (40,536). Within the ivermectin cohort, average age was 51.9 + 17.8 years, 43% were male, 60% had glucocorticoids and 1% required ventilator support. In the remdesivir cohort, average age was 62.0 + 16.0 years, 54% were male, 64% had glucocorticoids and 2% required ventilator support. After using propensity score matching and adjusting for potential confounders, ivermectin was associated with reduced mortality vs remdesivir (OR 0.308, 95% CI (0.198,0.479)),Risk Difference -5.224%, CI (-7.079%,-3.369%), p <0.0001.

Conclusion

Ivermectin use was associated with decreased mortality in patients with COVID-19 compared to remdesivir. To our knowledge, this is the largest association study of patients with COVID-19, mortality and ivermectin. Further double-blinded placebo-controlled RCTs with large samples are required for definite conclusion. In the future, if more publications are published with the similar result to the current analyses, the certainty of evidence will increase.

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