

## **Abstract**

**Background:** So far, no antiviral drug has been proven to be clinically effective for COVID-19.

**Objective:** Investigation of the safety and efficacy of favipiravir and tenofovir alafenamide in hospitalized patients with covid-19

**Materials and Methods:** In this randomized clinical trial, 95 patients with covid-19 were included in the study and were placed in each of the groups based on the table of random numbers. The first intervention group: the group receiving favipiravir regimen. Eight tablets of favipiravir 200 mg in the form of stat. Then: favipiravir tablets 600 mg three times a day (three tablets each time) for 5 days and the second intervention group: tenofovir alafenamide regimen received one tablet daily for 5 days. The control group of patients received ReciGen (interferon beta-1a). Supportive and routine treatments were the same in both groups. Then, the patients were followed up in terms of length of stay in the intensive care unit, death in the hospital, length of stay, response to clinical and laboratory treatment, clinical improvement, the amount of drug side effects, and the results were recorded in the relevant checklist. Patients were followed up for two weeks after discharge and any possible complications were recorded. Finally, all the patients' information was entered into pre-designed checklists, and all the information was entered into SPSS v25 statistical analysis program and the data was analyzed.

**Results:** Out of 95 patients, 30 received ReciGen, 31 received favipiravir and 34 received tenofovir alafenamide. The average age of the patients was  $56.23 \pm 19.70$  years. The majority of participants in all three groups were men. Out of 95 patients, a total of 13 (13.7%) died. The length of hospitalization in the patients receiving tenofovir alafenamide was significantly less than the other treatment groups, but the oxygen saturation in the group of patients receiving ReciGen had

significantly improved compared to the beginning of the study. According to the Post Hoc test, there was a statistically significant difference in the length of hospitalization between the two groups of favipiravir and tenofovir alafenamide.

**Conclusion:** According to the results of the present study, it seems that tenofovir alafenamide is likely to be effective in reducing the length of hospitalization of patients with covid, but none of these drugs had a clear effect on reducing death.

**Keywords:** Covid 19, Favipiravir, Tenofovir Alafenamide, ReciGen