Does high dose favipiravir improve COVID-19 pneumonia patients' outcome? - A retrospective cohort study

Lau Hui Ting, Abdul Rahman Ahmad Kashfi, Mohd Noh Mimi Nashra, Ya Najibah, Ahamad Fouzi Liyana

Hospital Sultanah Nur Zahirah

ABSTRACT

Introduction: Human Coronavirus Disease COVID-19 is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Favipiravir is an oral, broad-spectrum inhibitor of viral RNA-dependent RNA polymerase. The Malaysian national consensus guidelines recommended standard favipiravir dosage (1800mg BD day 1 and 800mg BD for 5-14days) to treat COVID-19 pneumonia, which was complied by HSNZ since January 2021. A study in Thailand noted better prognosis in patients given higher favipiravir doses. The Hospital Sultanah Nur Zahirah infectious disease team applied compassionate treatment, with increased doses (>45mg/kg/day) since June 2021. This study aims to compare the clinical deterioration of patients receiving high or standard doses of favipiravir. **Methods:** This is a retrospective cohort study. Electronic medical record of 122 patients admitted during January to August 2021 were selected. Clinical deterioration is defined by occurrence of hypoxia requiring increased oxygenation throughout admission. Analysis via chi-square and Man-Whitney U test were done to compare among two groups. **Results:** The mean age is 57.4±16.3 y/o, with 65 (53.3%) men, and 117 (95.9%) Malays. Median day of illness upon admission is 5 (IQR: 3-6), 72(59%) patients have underlying comorbidities. There is no significant difference in baseline characteristics among both groups. Chi-square analysis of occurrence hypoxic deterioration shows no significant difference. However, significant difference is noted in days to deterioration ($p<0.001$) with high dose 6 days (IQR: 5-7.75), vs standard dose 1 days (IQR: 1-3). **Conclusion:** Among COVID-19 category 4 patients, high dose favipiravir shows superiorly in delaying clinical deterioration, however no significant difference in occurrence of deterioration.