control group receiving ward level standard care was established retrospectively.

Results Forty patients were recruited into both the control and treatment groups. Results were analysed using Chi-squared statistics on Microsoft Excel. The primary outcome, namely; hospital mortality, demonstrated a significant difference between the groups ($p=0.048$) with no discernible difference in side effect profile.

Conclusion This data supports the use of tocilizumab in patients with COVID-19 disease, noting its positive effect on hospital mortality for COVID-19 patients on non-invasive respiratory support but not requiring critical care. Moreover, the limited side effect profile witnessed suggests tocilizumab can be safely administered in a non-critical care setting.

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USE OF ANGIOTENSIN-CONVERTING-ENZYME INHIBITORS AND ANGIOTENSIN RECEPTOR BLOCKERS IN COVID-19 INFECTION DOES NOT ADVERSELY AFFECT CLINICAL OUTCOMES INCLUDING NEED FOR NON-INVASIVE AND INVASIVE VENTILATION

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Introduction It has been hypothesized that use of Angiotensin-Converting-Enzyme Inhibitors (ACE-I) and Angiotensin Receptor Blockers (ARB) are associated with worse outcomes in COVID-19 through upregulation of ACE2 receptors.¹ Recent studies have shown no association between ACE-I/ARB use and increased mortality but there is limited information on other markers of disease severity such as need for Non-invasive and invasive ventilation. We assessed the effect of ACE-I/ARB on the outcomes of COVID-19 patients.

Methods A retrospective observational cohort study of patients with confirmed COVID-19 admitted to the respiratory units during a 1-year period. Patient demographics, clinical and medication history and clinical outcomes were extracted from written and electronic records. Primary outcomes – length of stay (LOS), NIV requirement, intensive care (ITU) admission, intubation and death – were compared between those who received ACE-I/ARB concurrently with their COVID-19 treatment and those who did not. Statistical analysis was performed using chi-squared test and odds ratio (OR).

Results Of 521 patients with confirmed COVID-19 (median age 59 years, 62.6% male), 183 (35.1%) required NIV, 108 (20.7%) were admitted to ITU, 60 (11.5%) were intubated and 41 (7.9%) died. In total, 151 (29%) were on ACE-I/ARB treatment, most commonly for hypertension. There was no difference in median LOS between those on ACE-I/ARB treatment and those not (11 and 10 days respectively, $p=0.20$). There was no difference between NIV requirement (OR 1.13, 95% CI 0.71–1.56), admission to intensive care (OR 0.64, 95% CI 0.50–1.36), intubation (OR 0.65, 95% CI 0.43–1.58) and death (OR 1.15, 95% CI 0.53–2.11) between the two groups ($p>0.05$).

Conclusion There was no difference in clinical outcomes between COVID-19 patients on ACE-I/ARB and those who were not, in particular with regards to need for non-invasive and invasive ventilation. Our findings support current recommendations for continued use of ACE-I/ARB in COVID-19 infection.

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THE IMPACT OF DRUG THERAPIES ON COVID-19 MORTALITY IN A UK TERTIARY CENTRE

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Introduction and Objectives The availability of treatment options for Covid-19 is rapidly expanding. Whilst the efficacy data is well-established from clinical trials, real-life efficacy of drug therapies remains lacking. We aimed to compare clinical outcomes between first and second wave of Covid-19 and determine real-world effectiveness of dexamethasone on 30-day mortality.

Methods This is a retrospective observational study. Clinical data and information regarding 30-day mortality, length of stay (LOS) and Intensive Care Unit (ICU) admission of hospitalised Covid-19 patients during early first wave (10.03.2020 to 13.04.2020) and second wave (01.12.2020 to 09.02.2021) were collected. Treatment was limited to second wave and included either dexamethasone only or both remdesivir and dexamethasone. The effectiveness of dexamethasone only on 30-day mortality was measured.

Results Of 373 patients (64.3% male) during the first wave, 24.9% died within 30 days. The 30-day mortality rate was lower during the second wave (61/324, 18.8%, p -value=0.064). Patients were younger (mean [SD], 60.0 [16.5] years) and had higher body mass index (mean [SD], 30.3 [11.0] kg/m²) during the second wave than the first wave (68.7 [14.8] years and 28.2 [7.70] kg/m²). In the first wave, no patients received specific drug therapy for Covid-19. However, 86.5% of patients received dexamethasone only during the second wave. The LOS for the first wave was longer (median (IQR): 5 (2–11) days) compared to the second wave (4 (2–9) days, $p=0.013$). ICU admission during the second wave (11.2%) was also lower than the first wave (23.4%, $p<0.001$). In second wave, 14.3% of patients who were given dexamethasone died within 30 days compared to 25% who had no treatment (p -value=0.088).

Conclusions In the real-world setting, there was an improvement in mortality, shortened hospital LOS and lower ICU admission rate between early first and second waves of the pandemic. The major difference in treatment strategy between the two waves was the approval of drug therapies in hospitalised patients. Dexamethasone reduced the 30-day mortality, although it did not reach statistical significance, likely due to the retrospective nature and small sample size of this study. Our findings corroborate clinical trial data on the benefit of dexamethasone therapy.