



Association of ACEI/ARB with COVID-19

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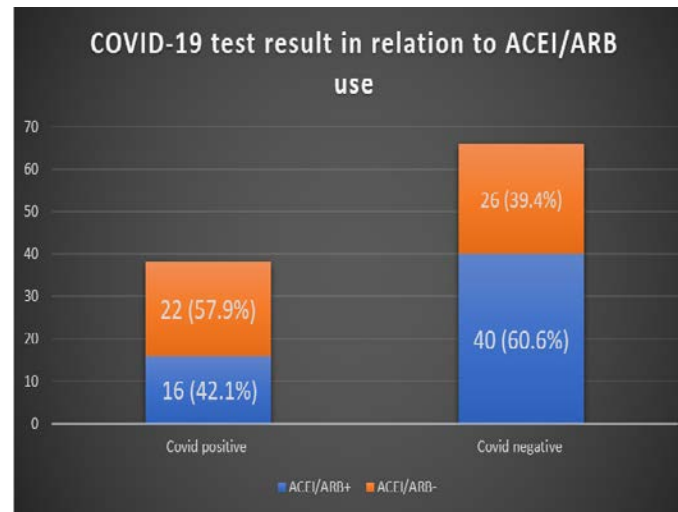
Introduction

- Animal models showed COVID-19 Viral entry into cells is via the Angiotensin Converting enzyme 2, and the Transmembrane Serine Proteinase 2(TMPRSS2)¹.
- It has been hypothesized that use of ACE2 inhibitors or receptor blockers(ACEI/ARB) increased the likelihood of COVID-19 ².
- We aimed to study the Association of ACEI/ARB use with the incidence of COVID-19

METHODS

- The study design was a retrospective observational study.
- Study period was February 1st to May 1st 2020.
- Data was collated via EMR from all hospitals in the Rochester Regional Health System(RRH)
- Inclusion criteria were: (1) age 30-60 years, and (2) isolated diagnosis of hypertension.
- 104 patients meet inclusion criteria.
- IRB approval was obtained.

Results



• Association of COVID-19 and ACEI/ARB use.

Difference	18.5 %
95% CI	-1.2980% to 36.4373%
Chi-squared	3.289
DF	1
Significance level	P = 0.0697

- Using Chi-squared test to compare proportions of patients who are COVID+/- and are taking or - not taking an ACE/ARB. -

- Statistical analysis with a Chi-squared test showed a difference of 18.5% (P= 0.07, CI -1.3% -36.5%) which was not significant.

Discussion

- ACEI/ARB use was not associated with an increased incidence of COVID-19.
- Findings in our study are consistent with other observational studies ³
- These studies also analyzed severity of disease and mortality and showed no association with ACEI/ARB use.
- Professional societies, such as ACC/AHA/HFSA recommend continuation of these medications for their cardiovascular indications

References

1. Diaz, J. H. (2020). Hypothesis: angiotensin-converting enzyme inhibitors and angiotensin receptor blockers may increase the risk of severe COVID-19. In *Journal of travel medicine* (Vol. 27, Issue 3).
2. Feng L, Karakiulakis G, Roth M. Are patients with hypertension and diabetes mellitus at increased risk for COVID-19 infection? *The Lancet Respiratory Medicine*. 2020 (Published online March 11, 2020).
3. Mehta, N., et al (2020). Association of Use of Angiotensin-Converting Enzyme Inhibitors and Angiotensin II Receptor Blockers With Testing Positive for Coronavirus Disease 2019 (COVID-19). *JAMA Cardiology*, 5(9), 1020–1026.