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LETTER TO THE EDITOR

CLINICAL CARDIOLOGY WILEY

Re: Is there a difference in the effect between the angiotensin-converting enzyme inhibitor and angiotensin-receptor blocker on the COVID-19?

To the Editor

We thank Dr Chen et al. for their insightful comments on our meta-analysis and appreciate the opportunity to address their concerns. Dr Chen et al. suggested that a difference might exist between the effects of angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin-receptor blockers (ARBs) on the COVID-19. However, the limited studies precluded us from performing a subgroup analysis stratified by renin-angiotensin-aldosterone system inhibitors or blockers as described in our study limitations. Recently, several new articles were published, so we re-searched the databases (Pubmed, Embase, medRxiv) and added three articles[1-3] (combining with our pervious meta-analysis[4]) for providing the specific results for a ACEIs or ARBs. As shown in Figure 1, there is no significant difference between ACEIs or ARB in the effect on positive COVID-19, severity and death (*P* for positive COVID-19 = .76, *P* for severe COVID-19 = .63, *P* for death = .47) (Figure 1). Secondly, inflammation certainly plays a crucial role in COVID-19. Another meta-analysis also found that interleukin-6 levels were reduced in the ACEI group COVID-19 from positive patients vs non-ACEIs.[5] However, an open-label study did not find a significant improvement of sarilumab (an interleukin-6 blocker) in clinical improvement and mortality in patients with severe COVID-19 compared with the standard of care group.[6] Therefore, more trials were needed to clarify its mechanism of ACEIs/ARBs on immune response in COVID-19.

CONFLICT OF INTEREST

The author declares no potential conflict of interest.

DATA AVAILABILITY STATEMENT

Data available on request from the authors

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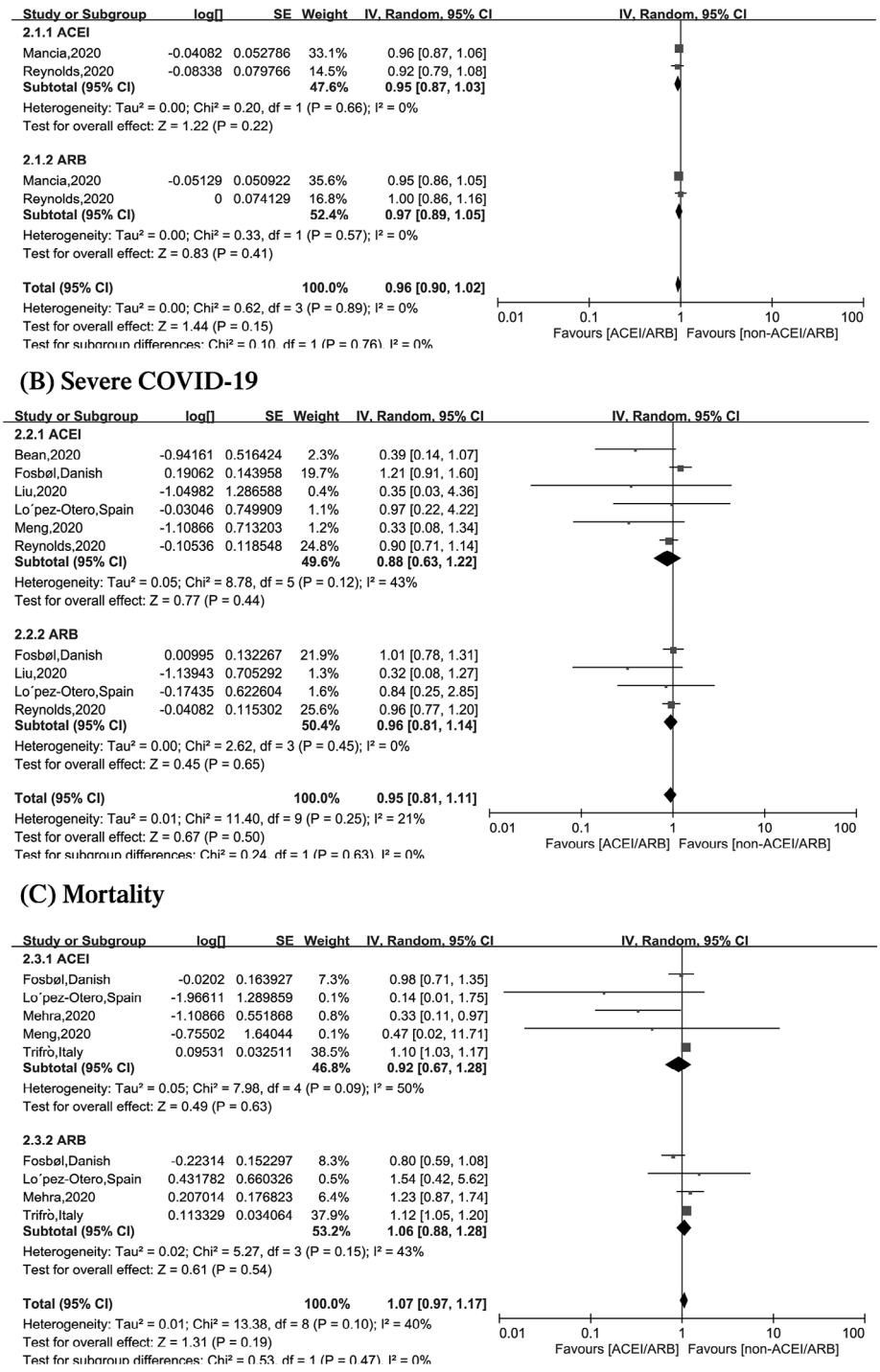

FIGURE 1 Summary of the associations between use of ACEI/ARB and clinical outcomes among patients with COVID-19 stratified by ACEI and ARB: A, risk of COVID-19 infection; B, risk of severe COVID-19 infection; C, mortality. ACEI, angiotensin-converting enzyme inhibitors; ARB, angiotensin-receptor blockers