

1.68,  $p=0.78$ ,  $I^2=0\%$ ), myocardial infarction ( $RR=0.83$ , 95% CI 0.49 to 1.43,  $p=0.51$ ,  $I^2=0\%$ ), and TVR ( $RR=1.21$ , 95% CI 0.72 to 2.01,  $p=0.47$ ,  $I^2=21\%$ ) (Figure 1).

Based on the currently available data from RCTs, which is summarized in the current meta-analysis, DCB is noninferior to DES in the treatment of SV-dCAD. This makes DCB an attractive treatment strategy in this patient population. The primary benefit of DCB is related to the lack of stent elements left over inside the coronary circulation. This eliminates the risk of stent thrombosis, which has been the main dreaded complication of DES.<sup>2-5</sup> Another vital benefit of DCB is shortening the duration of dual antiplatelet therapy to 4 weeks, which is a significant gain in patients at high risk of bleeding who cannot tolerate a prolonged course of dual antiplatelet therapy.<sup>2-5</sup>

In conclusion, the currently available data from RCTs show comparable outcomes for DCB and DES in SV-dCAD and supports DCB as an alternative treatment to DES in patients with small vessels de-novo coronary artery disease.

## Disclosure

The authors have no disclosures to report.

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## Meta-Analysis of the Effect of Aspirin on Mortality in COVID-19



Repurposing of existing medications has widely been used in studies since the emergence of coronavirus disease 2019 (COVID-19). Besides dexamethasone in selected patients,<sup>1</sup> no medical treatment to date has been shown to improve mortality in patients with COVID-19 infection. Aspirin is associated with reduced mortality and lower risk of acute respiratory distress syndrome in critically ill patients without COVID-19.<sup>2,3</sup> Although the exact mechanism behind this effect remains unclear, possible protective effects of aspirin may be related to its antithrombotic, anti-inflammatory, and immunomodulation effects.<sup>3</sup> As severe COVID-19 infection is mainly a multisystem inflammatory process, use of aspirin can theoretically provide positive outcomes. However, the role of aspirin in patients with COVID-19 is not clear and has not adequately been studied. In this meta-analysis, we report the association between aspirin use and mortality in COVID-19.

We searched PubMed database looking for relevant articles using (“COVID-19” and “aspirin”) and (“SARS-CoV-2” and “aspirin”) from

inception until December 19, 2020. No language restriction was applied. Inclusion criteria were (1) clinical trials or cohort studies, (2) the study population included patients with confirmed COVID-19 infection, (3) use of aspirin was reported in the study, (4) mortality among aspirin users was reported or could be calculated and compared with nonaspirin users. All other studies were excluded. Review Manager 5.4.1 was used to perform a random effect model analysis to compare mortality between patients with COVID-19 infection who use aspirin compared with those who do not. Mantel-Haenszel risk ratio with its 95% confidence intervals was calculated. Cochran's Q and  $I^2$  index were used for heterogeneity estimation. An  $I^2$  index  $<25\%$  was considered to be low, an  $I^2$  index between 25% and 80% was considered to be moderate, and an  $I^2$  index  $>80\%$  was considered to be high. Sensitivity analysis was done by excluding 1 study at a time.

Initial search resulted in 112 articles. After applying our inclusion criteria and deduplications, only 3 studies with a total of 1,054 patients were included in the analysis.<sup>4-6</sup> Characteristics of the included studies are summarized in (Table 1). About 19.2% of these patients were aspirin users. Mortality among aspirin users was 22.6% compared with mortality of 18.3% among nonaspirin users (risk ratio 1.12, 95% confidence intervals [0.84, 1.50]).  $I^2$  index was 0%, suggestive of low heterogeneity. Due to the small number of studies ( $<10$ ), small-study bias was not assessed as the analysis was underpowered to detect such bias. Sensitivity analysis yielded consistent results (Figure 1).

The results of this analysis suggest no association between the use of aspirin and mortality in patients with COVID-19. Although patients on aspirin tend to have more risk factors for severe COVID-19 infection (eg, older age, pre-existing coronary artery disease, diabetes mellitus, etc), the low heterogeneity in this analysis despite differences in characteristics of the population of the included studies likely suggests no protective effect of aspirin among different groups of patients. However, more studies are needed to confirm this finding.

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Table 1  
Characteristic of the included studies

Study	Year	Country	Study type	Characteristics of patients
Amadari et al	2020	Iran	Retrospective	Hospitalized patients with COVID-19
Yuan et al	2020	China	Retrospective	Hospitalized patients with concurrent COVID-19 and coronary artery disease
Chow et al	2020	United States	Retrospective	Hospitalized patients with COVID-19

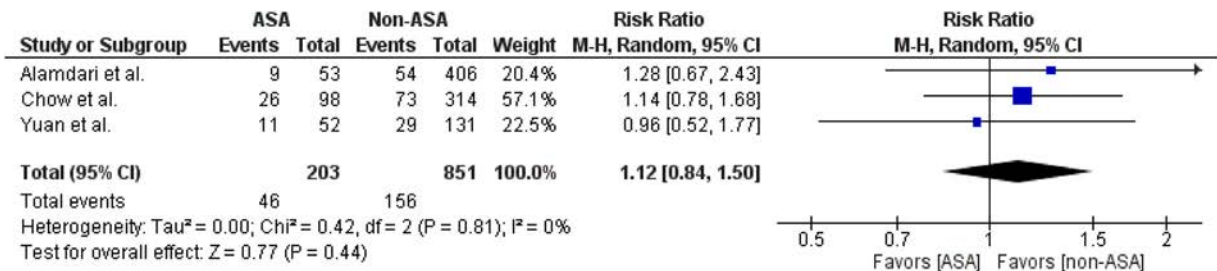


Figure 1. Forest plot examining the association between the use of aspirin and mortality in COVID-19 infection. ASA = aspirin; CI = confidence interval; M-H = Mantel-Haenszel.

## Disclosures

The authors have no conflict of interest to disclose.

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## High Birth Prevalence of Congenital Heart Diseases in Conjoined Twins and Higher Order Multiple Births

The birth prevalence of congenital heart disease (CHD) in the general population is 8 in 1,000 live births. In the United States, twins and triplets occur in approximately 1 in 80 and 1 in 8,000 pregnancies, respectively.<sup>1,2</sup> Congenital heart defects are more common in twins than in singletons, and there is an increased occurrence in monochorionic twins compared with dichorionic twins.<sup>3–5</sup> There is limited information on the prevalence of CHD in conjoined twins and no information on higher-order multiple births. In this study, we report the prevalence of CHD in conjoined twins as well as in triplets and higher-order multiple births in the United States.



We performed a retrospective nationwide study utilizing the Kids' Inpatient Database (KID), which was provided by the Healthcare Cost and Utilization Project (HCUP). The KID includes data from more than 3 million births annually. The KID is published every 3 to 4 years, with 2016 being the most recent year currently available. Our analysis includes data from the periods 2003, 2006, 2009, 2012, and 2016. All newborns (singleton, twins, higher-order multiple births) were analyzed.

Congenital heart diseases were identified through ICD-9 and ICD-10 codes as previously described.<sup>6</sup> In our analysis severe CHD included truncus arteriosus, transposition of great arteries, double outlet right ventricle, tetralogy of Fallot, hypoplastic left heart syndrome, other single ventricle lesions, atrioventricular septal defect, pulmonary atresia, tricuspid atresia, interrupted aortic arch, and total anomalous pulmonary venous return. We excluded congenital heart block, pulmonary arteriovenous malformation, anomalies of peripheral vascular system, and other specified anomalies of the circulatory system. We further excluded patent ductus arteriosus (PDA), patent foramen ovale (PFO), and secundum atrial septal defect (ASD) from the CHD list for 2 reasons: (1) PDA can be present after the first 24 hours of life in healthy children, and (2) there is not a precise way to differentiate PFO from secundum ASD using this administrative database.