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☆ **Spotlight on Special Topics**

INCIDENCE AND OUTCOMES OF IN-HOSPITAL CARDIAC ARREST DURING THE CORONAVIRUS DISEASE 2019 PANDEMIC AND THE PRECEDING ERA: A SYSTEMATIC REVIEW AND META-ANALYSIS

Poster Contributions

For exact presentation time, refer to the online ACC.22 Program Planner at <https://www.abstractsonline.com/pp8/#!/10461>

Session Title: Spotlight on Special Topics Flatboard Poster Selections: COVID
Abstract Category: 61. Spotlight on Special Topics: Coronavirus Disease (COVID-19)

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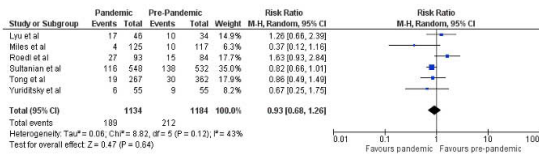
Background: Hospitalized patients of coronavirus disease 2019 (COVID-19) are at risk of in-hospital cardiac arrest (IHCA). It is unknown whether the incidence and outcomes of IHCA during the pandemic differ from the pre-pandemic period. The aim of this systematic review was to evaluate the incidence, characteristics, and survival outcome of IHCA during the COVID-19 pandemic and the pre-pandemic period.

Methods: Electronic databases PubMed, Embase, Web of Science, and Cochrane were systematically reviewed from inception up to October 2021, for studies evaluating IHCA. A random-effects model meta-analysis was conducted, and heterogeneity was assessed using I-squared test.

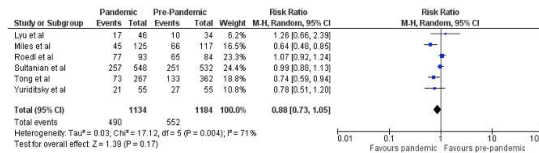
Results: Out of 2,264 articles, six studies with 2,318 patients (1,184 pre-pandemic and 1,134 pandemic IHCA) were included. No significant difference in the incidence of IHCA between the two periods (risk ratio (RR): 2.18; 95%CI: 0.90-5.26; p=0.08) was found. There was no difference in the likelihood of an initial shockable rhythm (RR:0.93; 95%CI: 0.68-1.26; I²=43%; p=0.64). There was a trend towards less chances of achieving sustained return of spontaneous circulation (RR:0.88; 95%CI: 0.73-1.05; I²=71%; p=0.17) after IHCA during the pandemic, but no statistical significance. Likelihood of discharge survival after IHCA was similar between the two periods (RR:0.90; 95%CI: 0.70-1.16; I²=51%; p=0.43) (Figure 1).

Conclusion: Survival after in-hospital cardiac arrest remained largely unchanged despite the COVID-19 pandemic.

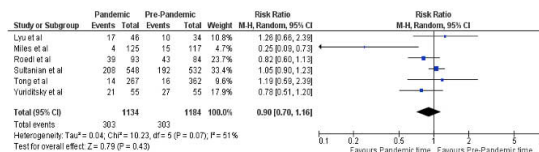
Study	Country	Pandemic period timeline	Pre-pandemic period timeline
Lyu et al.	Singapore	March 2020 to May 2020	March 2019 to May 2019
Miles et al.	USA	March 2020 to May 2020	January 2019 to December 2019
Roodi et al.	Germany	February 2020 to May 2020	February 2019 to May 2019
Sultanian et al.	Sweden	March 2020 to July 2020	January 2020 to March 2020
Tong et al.	China	January 2020 to January 2021	January 2019 to January 2020
Yuriditsky et al.	USA	March 2020 to May 2020	March 2019 to October 2019



Plot 1: Presence of an initial shockable rhythm between the pandemic and pre-pandemic groups.



Plot 2: Sustained return of spontaneous circulation between the pandemic and pre-pandemic groups.



Plot 3: Survival to hospital discharge between pandemic and pre-pandemic groups.

Figure 1: Comparison of in-hospital cardiac arrests between the pandemic and pre-pandemic periods