

## Antiplatelet therapy and outcome in patients with COVID-19. Results from a multi-center international prospective registry (HOPE-COVID19)

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**Background:** No standard therapy is currently recommended for Coronavirus-19 disease (COVID-19). Autopsy studies showed high prevalence of platelet-fibrin rich micro-thrombi in several organs. Aim of the study was to evaluate safety and efficacy of antiplatelet therapy (APT) in COVID-19 hospitalized patients and its impact on survival.

**Methods:** 7824 consecutive patients with COVID-19 were enrolled in a multicenter-international prospective registry (HOPE-COVID19). Clinical data and in-hospital complications were recorded. AP regimen, including aspirin and other antiplatelet drugs, was obtained for each patient.

**Results:** During hospitalization 730 (9.3%) patients received AP drugs with single (93%, n=680) or dual APT (7%, n=50). Patients treated with APT were older ( $73 \pm 12$  vs  $62 \pm 17$  years,  $p < 0.01$ ), more frequently male (70% vs 64%,  $p < 0.01$ ) and had higher prevalence of diabetes (39.5% vs 17%,  $p < 0.01$ ).

Patients treated with APT showed no differences in terms of in-hospital mortality (18% vs 19%,  $p = 0.64$ , Log Rank  $p = 0.23$ ), need of invasive ventilation (8.7% vs 8.5%,  $p = 0.88$ ) and bleeding (2.1% vs 2.4%,  $p = 0.43$ ); However, after excluding patients treated only with anticoagulation, APT was associated with lower mortality rates (Log Rank  $p < 0.01$ , relative risk 0.79, 95% CI 0.70–0.94) (Figure 1).

At multivariable analysis including age, gender, diabetes, hypertension, respiratory failure, pre-hospital therapy with antiplatelet drugs, in-hospital APT, and anticoagulation therapy, in-hospital APT was associated with a lower mortality risk (relative risk 0.29, 95% CI 0.22–0.38,  $p < 0.001$ ).

**Conclusions:** APT during hospitalization for COVID-19 could be associated with lower mortality risk without increased risk of bleeding. Randomized trials are needed to confirm these preliminary data.

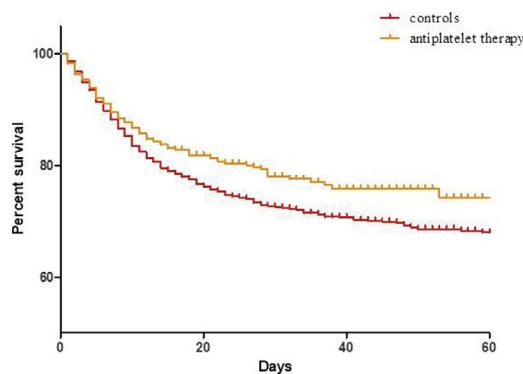


Figure 1