

# **Oral anticoagulant therapy at hospital admission associates with lower mortality in older COVID-19 patients with atrial fibrillation. An insight from the Covid Registry**

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**Introduction.** Atrial fibrillation (AF), the arrhythmia most frequently diagnosed in older patients, associates with serious, thrombo-embolic, complications and high mortality. COVID-19 severely affects aged subjects, determining an important prothrombotic status.

**Purpose.** Aim of this study was to evaluate mortality-related factors in older AF patients with COVID-19.

**Methods.** We included 806 in-hospital COVID-19 patients aged 60 years or more hospitalized between March 1st and June 6th 2020 and enrolled in a multicenter observational study.

**Results.** The prevalence of AF was 21.8%. In-hospital mortality was higher in the AF group (36.9 vs. 27.5%;  $p = 0.015$ ). Among AF patients, those who survived were younger ( $81 \pm 8$  vs.  $84 \pm 7$  years;  $p = 0.002$ ), had a lower CHA<sub>2</sub>DS<sub>2</sub>-VASc score ( $3.9 \pm 1.6$  vs.  $4.4 \pm 1.3$ ;  $p = 0.02$ ) and were more frequently treated with oral anticoagulants at admission (63.1 vs. 32.3%;  $p < 0.001$ ) than those who died in hospital. At multi-variable logistic regression analysis, lower age ( $p = 0.042$ ), a better functional profile ( $p = 0.007$ ), less severe COVID-19 manifestations at admission ( $p = 0.001$ ), and the use of Vitamin K antagonists (OR = 0.16, 95%CI: 0.03-0.84;  $p = 0.031$ ) or DOACs (OR = 0.22, 95%CI: 0.08-0.56;  $p = 0.002$ ), compared to antiplatelet therapy or no treatment at all, were associated with a lower chance of in-hospital death.

**Conclusions.** AF is a prevalent condition and a severity factor in older COVID-19 patients. Advanced age, dependency and severe clinical manifestations of disease characterized older AF subjects with a worse prognosis. Interestingly, pre-admission anticoagulant therapy correlated positively with in-hospital survival.