Previous psychiatric disorders and antipsychotic drugs in COVID-19 patients: early findings on possible worse outcome

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Background: There are a range of traditional risk factors for COVID-19, but it is not well established if there are also psychiatric related risk factors. These factors could increase angiotensin-converting enzyme 2 expression and potentiate COVID-19 cell entry.
Purpose: We aimed to assess if psychiatric disorders and antipsychotic treatments represent risk factors for COVID-19 worst outcomes.
Methods: We describe the demographics, symptoms, therapeutic management, and survival outcomes of COVID-19 in the population who were admitted in a single academic hospital in Northern Italy between March 1 and June 30, 2020. Patients were determined to have COVID-19 if they had a positive SARS-CoV-19 swab. We used logistic regression analyses to control for confounding by concomitant risk factors for COVID-19 and for therapeutic management of comorbidities including psychiatric disorders and antipsychotic related drugs.
Results: Among 609 patients, in-hospital death occurred in 120 (19.7%). A psychiatric disorder in the previous years was overrepresented ($p<0.0001$) in non-survivors (35.5%) in comparison with survivors (22.1%). Age and a history of hypertension were as well, established ($p<0.005$) risk factors for COVID-19 adverse outcomes: 80.6±11.4 vs 68±17.4 years and 70% vs 52% of people with hypertension in non-survivors vs survivors. Various pre-existing conditions were also associated ($p<0.001$) with increased risk of death, such as stroke or transient ischemic attacks, chronic obstructive pulmonary disease (COPD) and chronic kidney disease (CKD) (20% vs 8%, 35% vs 17%, and 24% vs 10%, respectively). We did not observe that prior use of angiotensin converting enzyme inhibitors or angiotensin receptor blockers were more prevalent in non-survivors compared with survivors. On the opposite, prior use of aspirin, P2Y receptor antagonists, and antipsychotic drugs was more common ($p<0.001$) in non-survivors compared with their counterparts (36% vs 21%, 12% vs 5%, and 28% vs 10%, respectively). After multivariable adjustment, use of antipsychotic drugs was associated with higher risks of in-hospital death (OR: 2.27; 95% CI, 1.17–4.4). Other independent predictors of death were older age (OR: 2.8; 95% CI, 1.69–4.63), CKD (OR: 2.2; 95% CI, 1.21–4.03) and COPD (OR: 2.04; 95% CI, 1.22–3.42).
Conclusions: Antipsychotic drugs might be an independent risk factor for COVID-19 adverse outcomes. Although preliminary, our findings have implications for clinical services as they provide crucial information for understanding who is at greatest risk for COVID-19.