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Covid 19: Patients have many more complications than flu patients, finds US study

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Patients who had been admitted to hospital with covid-19 had many more complications, and more serious ones, than patients with influenza, says a study from the US Veterans Health Administration.¹ Patients with covid-19 were more likely than flu patients to need treatment in intensive care, had longer hospital stays, and were more likely to die.

“Certain racial and ethnic minority groups are disproportionately affected by covid-19 and ... this discrepancy is not solely accounted for by age and underlying medical conditions,” the authors reported.

Until now data have been lacking to compare in-hospital complications of patients with covid-19 with patients with influenza, the authors said. The Veterans Health Administration has 1255 health facilities that provide services to nine million veterans, mostly men.

The study compared in-hospital complications experienced by 3948 patients with covid-19 who were admitted to hospital between 1 March and 31 May 31 with those of 5453 patients with flu admitted between 1 October 2018 and 1 February 2020. All infections were laboratory confirmed.

Covid-19 patients were slightly older than the flu patients (mean 70 versus 69 years). Before hospital admission almost all patients had underlying conditions (93.6% of covid-19 patients and 95.1% of flu patients.). Nearly half of covid-19 patients were black (48.3%), and 40.4% were white, whereas 64% of flu patients were white and 24.7% black.

The report said, “Patients with covid-19 had almost 19 times the risk for acute respiratory distress syndrome (ARDS) than did patients with influenza and more than twice the risk for myocarditis, deep vein thrombosis, pulmonary embolism, intracranial hemorrhage, acute hepatitis/liver failure, bacteremia, and pressure ulcers.”

Covid-19 patients were five times as likely to die as flu patients (21% versus 3.8% of patients). Hospital stays of covid-19 patients were almost three times as long as those of flu patients, and they were twice as likely to be admitted to an intensive care unit.

Covid-19 patients had a higher risk of respiratory complications than flu patients: twice the risk of pneumonia, 1.7 times the risk of respiratory failure, 19 times the risk of ARDS, and 3.5 times the risk of pneumothorax. The risk of some acute non-respiratory complications, such as sepsis and renal and cardiovascular complications, was also higher among covid-19 patients.

The researchers found that non-Hispanic black (African-American) covid-19 patients had a higher risk of respiratory, neurological, and renal

complications and sepsis than white covid-19 patients, even after they adjusted for age and underlying medical conditions. Among racial and ethnic minority patients nine complications were more common than among white patients: pneumonia, respiratory failure, ARDS, hypertensive crisis, cerebral ischaemia or infarction, intracranial haemorrhage, acute kidney failure, initiation of dialysis, and sepsis.

However, the risk of exacerbations of asthma and chronic obstructive pulmonary disease was lower among covid-19 patients than among flu patients.

1 Cates J, Lucero-Obusan C, Dahl RM, et al Risk for In-Hospital Complications Associated with COVID-19 and Influenza—Veterans Health Administration, United States, October 1, 2018–May 31, 2020. *MMWR Morb Mortal Wkly Rep*. 20 Octob 2020. doi: 10.15585/mmwr.mm6942e3.

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