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Dexamethasone in hospitalised COVID-19 patients not on intensive respiratory support

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Shareable abstract (@ERSpublications)
Although commonly used, dexamethasone within 48 h of admission was associated with increased 90-day mortality in patients hospitalised with COVID-19 not on oxygen and with no mortality benefit in patients on low-flow nasal cannula https://bit.ly/3l2aqjb

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Abstract

Background Dexamethasone decreases mortality in coronavirus disease 2019 (COVID-19) patients on intensive respiratory support (IRS) but is of uncertain benefit if less severely ill. We determined whether early (within 48 h) dexamethasone was associated with mortality in patients hospitalised with COVID-19 not on IRS.

Methods We included patients admitted to US Veterans Affairs hospitals between 7 June 2020 and 31 May 2021 within 14 days after a positive test for severe acute respiratory syndrome coronavirus 2. Exclusions included recent prior corticosteroids and IRS within 48 h. We used inverse probability of treatment weighting (IPTW) to balance exposed and unexposed groups, and Cox proportional hazards models to determine 90-day all-cause mortality.

Results Of 19 973 total patients (95% men, median age 71 years, 27% black), 15 404 (77%) were without IRS within 48 h. Of these, 3514 out of 9450 (34%) patients on no oxygen received dexamethasone and 1042 (11%) died; 4472 out of 5954 (75%) patients on low-flow nasal cannula (NC) only received dexamethasone and 857 (14%) died. In IPTW stratified models, patients on no oxygen who received dexamethasone experienced 76% increased risk for 90-day mortality (hazard ratio (HR) 1.76, 95% CI 1.47–2.12); there was no association with mortality among patients on NC only (HR 1.08, 95% CI 0.86–1.36).

Conclusions In patients hospitalised with COVID-19, early initiation of dexamethasone was common and was associated with no mortality benefit among those on no oxygen or NC only in the first 48 h; instead, we found evidence of potential harm. These real-world findings do not support the use of early dexamethasone in hospitalised COVID-19 patients without IRS.

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