

Clinical evidence does not support corticosteroid treatment for 2019-nCoV lung injury

Russel C, et al

The Lancet

February 6, 2020

DOI: S0140-6736(20)30317-2

Aim: To provide evidence that supports the WHO current interim guidance “against the use of corticosteroids when COVID-19 infection is suspected unless indicated for another reason (released Jan 28, 2020)

	Outcomes of corticosteroid therapy*	Comment
MERS-CoV	Delayed clearance of viral RNA from respiratory tract ²	Adjusted hazard ratio 0.4 (95% CI 0.2–0.7)
SARS-CoV	Delayed clearance of viral RNA from blood ⁵	Significant difference but effect size not quantified
SARS-CoV	Complication: psychosis ⁶	Associated with higher cumulative dose, 10 975 mg vs 6780 mg hydrocortisone equivalent
SARS-CoV	Complication: diabetes ⁷	33 (35%) of 95 patients treated with corticosteroid developed corticosteroid-induced diabetes
SARS-CoV	Complication: avascular necrosis in survivors ⁸	Among 40 patients who survived after corticosteroid treatment, 12 (30%) had avascular necrosis and 30 (75%) had osteoporosis
Influenza	Increased mortality ⁹	Risk ratio for mortality 1.75 (95% CI 1.3–2.4) in a meta-analysis of 6548 patients from ten studies
RSV	No clinical benefit in children ^{10,11}	No effect in largest randomised controlled trial of 600 children, of whom 305 (51%) had been treated with corticosteroids

CoV=coronavirus. MERS=Middle East respiratory syndrome. RSV=respiratory syncytial virus. SARS=severe acute respiratory syndrome. *Hydrocortisone, methylprednisolone, dexamethasone, and prednisolone.

Table: Summary of clinical evidence to date

Conclusion:

No clinical data exist to indicate that net benefit is derived from corticosteroids in the treatment of respiratory infection due to RSV, influenza, SARS-CoV, or MERS-CoV. So corticosteroid treatment should not be used for the treatment of 2019-nCoV-induced lung injury or shock.