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Effect of high *versus* low dose of dexamethasone on clinical worsening in patients hospitalised with moderate or severe COVID-19 pneumonia: an open-label, randomised clinical trial

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This study showed that in hospitalised COVID-19 patients with moderate or severe COVID-19 pneumonia needing oxygen therapy, high dose of dexamethasone reduced clinical worsening within 11 days after randomisation compared with low dose of dexamethasone https://bit.ly/3dBe5Aa

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Abstract

Background Low-dose dexamethasone demonstrated clinical improvement in patients with coronavirus disease 2019 (COVID-19) needing oxygen therapy; however, evidence on the efficacy of high-dose dexamethasone is limited.

Methods We performed a randomised, open-label, controlled trial involving hospitalised patients with confirmed COVID-19 pneumonia needing oxygen therapy. Patients were randomly assigned in a 1:1 ratio to receive low-dose dexamethasone (6 mg once daily for 10 days) or high-dose dexamethasone (20 mg once daily for 5 days, followed by 10 mg once daily for an additional 5 days). The primary outcome was clinical worsening within 11 days since randomisation. Secondary outcomes included 28-day mortality, time to recovery and clinical status at day 5, 11, 14 and 28 on an ordinal scale ranging from 1 (discharged) to 7 (death).

Results A total of 200 patients (mean±SD age 64±14 years; 62% male) were enrolled. 32 (31.4%) out of 102 patients enrolled in the low-dose group and 16 (16.3%) out of 98 in the high-dose group showed clinical worsening within 11 days since randomisation (rate ratio 0.427, 95% CI 0.216–0.842; p=0.014). The 28-day mortality was 5.9% in the low-dose group and 6.1% in the high-dose group (p=0.844). There was no significant difference in time to recovery, and in the seven-point ordinal scale at days 5, 11, 14 and 28.

Conclusions Among hospitalised COVID-19 patients needing oxygen therapy, high dose of dexamethasone reduced clinical worsening within 11 days after randomisation, compared with low dose.