

Dear Doctor,

Greetings from Micro Labs Limited. We are happy to bring you '**Physician connect**' which contains latest and interesting news in the field of Medicine

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- Tocilizumab in Hospitalized Patients with Severe Covid-19 Pneumonia
- Effect of Community-Initiated Kangaroo Mother Care on Postpartum Depressive Symptoms and Stress Among Mothers of Low-Birth-Weight Infants
- Orf/ Contagious pustular dermatitis - A Case Report

Should you require any specific article or medical information, please feel free to contact us at

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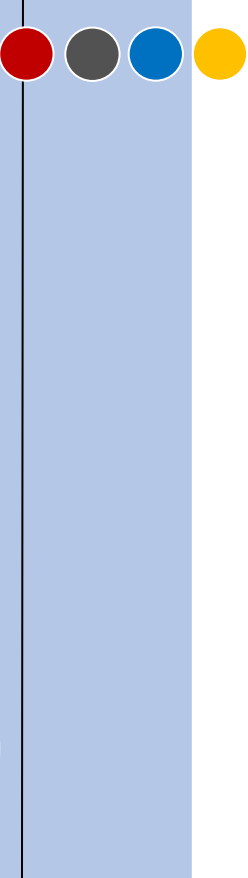
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Best Regards,

Medical Team, Micro Labs Limited

Tocilizumab in Hospitalized Patients with Severe Covid-19 Pneumonia

Coronavirus disease 2019 (Covid-19) is associated with immune dysregulation and hyperinflammation, including elevated interleukin-6 levels. The use of tocilizumab, a monoclonal antibody against the interleukin-6 receptor, has resulted in better outcomes in patients with severe Covid-19 pneumonia in case reports and retrospective observational cohort studies. Data are needed from randomized, placebo-controlled trials.



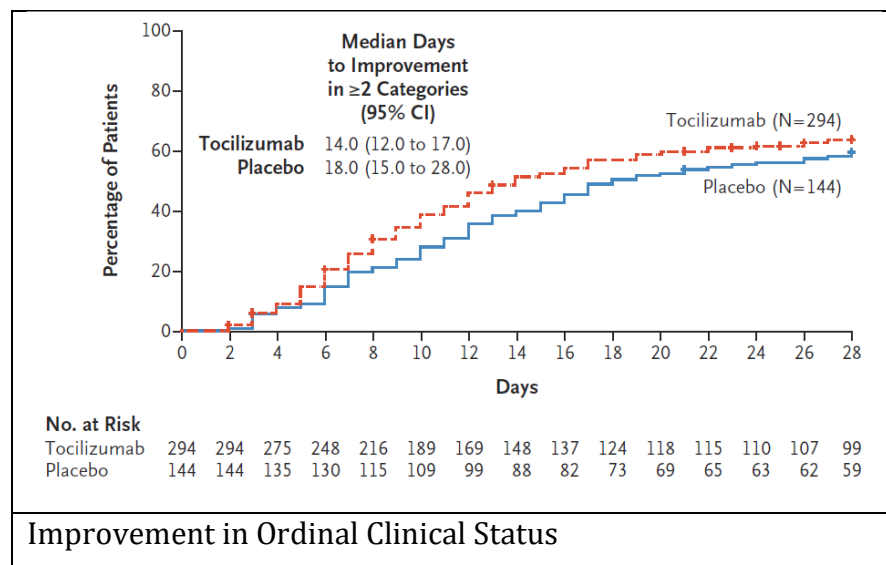
In this phase 3 trial, we randomly assigned patients who were hospitalized with severe Covid-19 pneumonia in a 2:1 ratio receive a single intravenous infusion of tocilizumab (at a dose of 8 mg per kilogram of body weight) or placebo. Approximately one quarter of the participants received a second dose of tocilizumab or placebo 8 to 24 hours after the first dose. The primary outcome was clinical status at day 28 on an ordinal scale ranging from 1 (discharged or ready for discharge) to 7 (death) in the modified intention-to-treat population, which included all the patients who had received at least one dose of tocilizumab or placebo.

Of the 452 patients who underwent randomization, 438 (294 in the tocilizumab group and 144 in the placebo group) were included in the primary and secondary analyses.

At day 14, the median value for clinical status on the seven-category ordinal scale was 3.0 (95% CI, 2.0 to 4.0) in the tocilizumab group and 4.0 (95% CI, 3.0 to 5.0) in the placebo group, for a between-group difference of -1.0 (95% CI, -2.0 to 0.5). Death was reported by day 28 in 58 patients (19.7%) in the tocilizumab group and in 28 (19.4%) in the placebo group, for a weighted difference of 0.3 percentage points (95% CI, -7.6 to 8.2; $P = 0.94$).

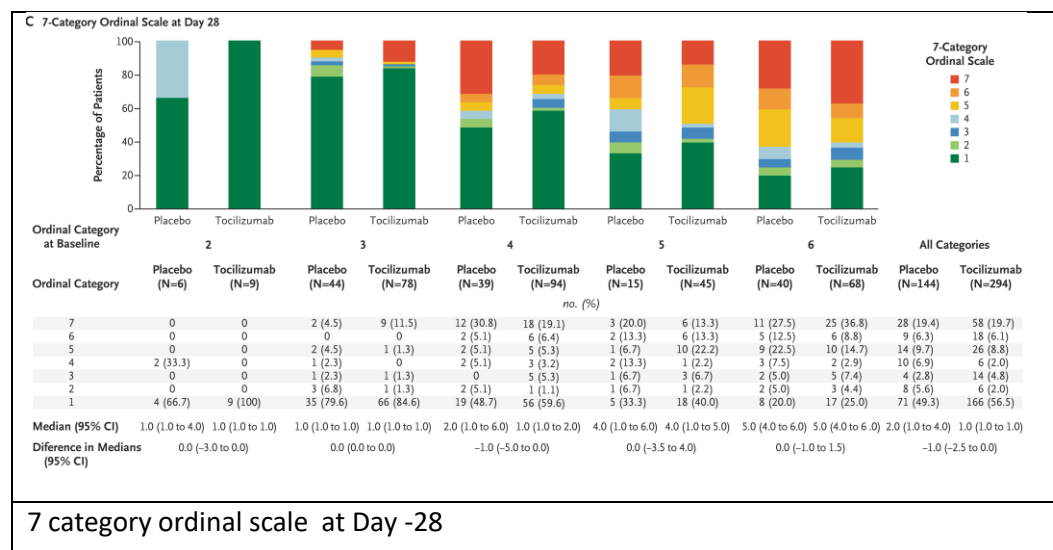
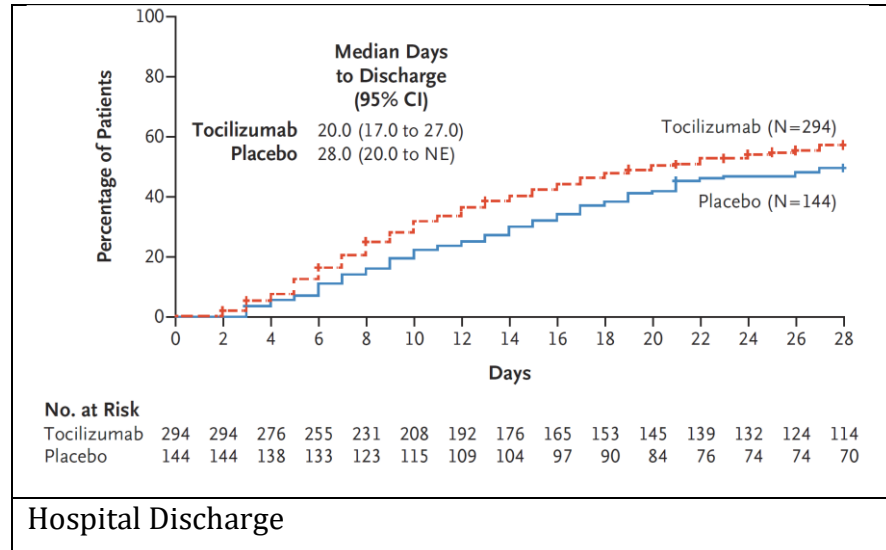
The median number of ventilator-free days was 22.0 (95% CI, 18.0 to 28.0) with tocilizumab and 16.5 (95% CI, 11.0 to 26.0) with placebo, for a difference of 5.5 days (95% CI, -2.8 to 13.0). The median time from baseline until patients had an improvement by at least two categories on the seven-category ordinal scale was 14 days (95% CI, 12 to 17) in the tocilizumab group and 18 days (95% CI, 15 to 28) in the placebo group (Cox

proportional hazards ratio, 1.26; 95% CI, 0.97 to 1.64). The median time until patients were discharged from the hospital or ready to be discharged was 20 days (95% CI, 17 to 27) in the tocilizumab group and 28 days (95% CI, 20 to not evaluable) in the placebo group (Cox proportional-hazards ratio, 1.35; 95% CI, 1.02 to 1.79). The median duration of ICU stay was 9.8 days in the tocilizumab group and 15.5 days in the placebo group, for a difference of 5.8 days (95% CI, -15.0 to 2.9).



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The median value for clinical status on the ordinal scale at day 28 was 1.0 (95% confidence interval [CI], 1.0 to 1.0) in the tocilizumab group and 2.0 (non-ICU hospitalization without supplemental oxygen) (95% CI, 1.0 to 4.0) in the placebo group (between-group difference, -1.0; 95% CI, -2.5 to 0; P=0.31 by the van Elteren test). In the safety population, serious adverse events occurred in 103 of 295 patients (34.9%) in the tocilizumab group



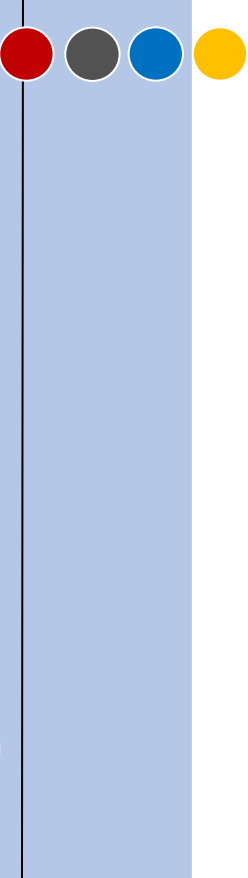
and in 55 of 143 patients (38.5%) in the placebo group. Mortality at day 28 was 19.7% in the tocilizumab group and 19.4% in the placebo group (weighted difference, 0.3 percentage points; 95% CI, -7.6 to 8.2; nominal $P=0.94$).

In this randomized trial involving hospitalized patients with severe Covid-19 pneumonia, the use of tocilizumab did not result in significantly better clinical status or lower mortality than placebo at 28 days.

Source: Rosas IO et al. N Engl J Med. 2021 Apr 22;384(16):1503-1516. doi: 10.1056/NEJMoa2028700

Effect of Community-Initiated Kangaroo Mother Care on Postpartum Depressive Symptoms and Stress Among Mothers of Low-Birth-Weight Infants

Postpartum depression affects quality of life and long-term psychological health in mothers and can also adversely affect mother-child interaction, breastfeeding, infant growth, and development. Pooled estimates from 53 studies in 23 low- and middle-income countries reported the prevalence of postpartum depression to be 19% (95%CI, 16%-23%). A meta-analysis that included 38 studies in India estimated the prevalence of postpartum depression to be 22%(95%CI, 19%-25%). The prevalence of depression is reported to be higher among mothers of preterm compared with full-term infants in the first 12 weeks after birth Approximately 1 in 5 women in low- and middle-



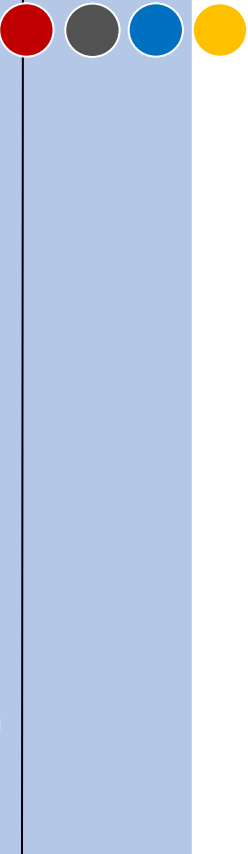
income countries experience postpartum depression, and the risk is higher among mothers of low-birth-weight (LBW) infants. Kangaroo mother care (KMC) is effective in improving survival among LBW infants, but the benefits of KMC for mothers are not well described.

Approximately 1 in 5 women in low- and middle-income countries experience postpartum depression, and the risk is higher among mothers of low-birth-weight (LBW) infants. Kangaroo mother care (KMC) is effective in improving survival among LBW infants, but the benefits of KMC for mothers are not well described.

The study was conducted to estimate the effects of community-initiated KMC (ciKMC) on maternal risk of moderate-to-severe postpartum depressive symptoms and on salivary cortisol concentration, a biomarker of stress.

This was an unmasked, parallel-group, individually randomized clinical trial. Participants included 1950 mothers of stable LBW infants (weighing 1500- 2250 g) in rural and semiurban low-income populations in North India enrolled between April 2017 and March 2018. Data analysis was performed from January to July 2020.

Eligible participants were randomly assigned to the intervention or control group by block randomization. The mothers in the intervention group were supported to practice ciKMC until 28 days after birth or until the infant wriggled out of the KMC position (ie, was no longer staying in the KMC position). The intervention included promotion and support of skin-to-skin



contact and exclusive breastfeeding through home visits. Postpartum depressive symptoms at the end of the neonatal period were measured using the Patient Health Questionnaire-9, with a score of 10 or higher used to identify moderate-to-severe depressive symptoms. Salivary cortisol concentration was measured in a subsample of 550 mothers before and after breastfeeding on day 28 after birth.

Of the 1950 participants (mean [SD] age, 23 [3.5] years), outcome assessment was completed for 974 of 1047 participants (93%) in the intervention group and 852 of 903 participants (94%) in the control group. Sixty-four percent of participants (1175 of 1826 participants) belonged to the lowest 3 wealth quintiles. The proportion of mothers with moderate-to-severe postpartum depressive symptoms was 10.8% (95%CI, 8.9%-12.9%; 105 of 974 mothers) in the intervention group vs 13.6% (95%CI, 11.4%-16.1%; 116 of 852 mothers) in the control group. The adjusted relative risk of moderate-to-severe maternal postpartum depressive symptoms was 0.75 (95%CI, 0.59-0.96), or an efficacy of 25%. There was no difference in day-28 salivary cortisol concentration between the ciKMC and control group mothers before or after breastfeeding. The analysis estimated that supporting 36 mothers to perform KMC at home would prevent 1 mother from experiencing moderate-to-severe postpartum depressive symptoms.

Effect of ciKMC on Maternal Postpartum Depressive Symptoms Among Study Participants

Outcome variable	Participants, No./Total No. (%)		RR (95% CI)	
	Control	ciKMC	Unadjusted	Adjusted ^a
Moderate-to-severe depressive symptoms ^b				
All mothers	116/852 (13.6)	105/974 (10.8)	0.79 (0.62-1.01)	0.75 (0.59-0.96) ^c
Subgroup				
Mothers of preterm infants	80/535 (15.0)	68/612 (11.1)	0.73 (0.55-1.00)	0.71 (0.52-0.96)
Mothers of full-term infants	36/317 (11.4)	37/362 (10.2)	0.90 (0.58-1.39)	0.86 (0.56-1.34)
Any depressive symptoms ^d				
All mothers	275/852 (32.3)	294/974 (30.2)	0.94 (0.82-1.07)	0.92 (0.81-1.05)
Subgroup				
Mothers of preterm infants	183/535 (34.2)	195/612 (31.2)	0.74 (0.55-1.00)	0.92 (0.78-1.09)
Mothers of full-term infants	92/317 (29.0)	99/362 (27.3)	0.90 (0.58-1.38)	0.91 (0.72-1.15)

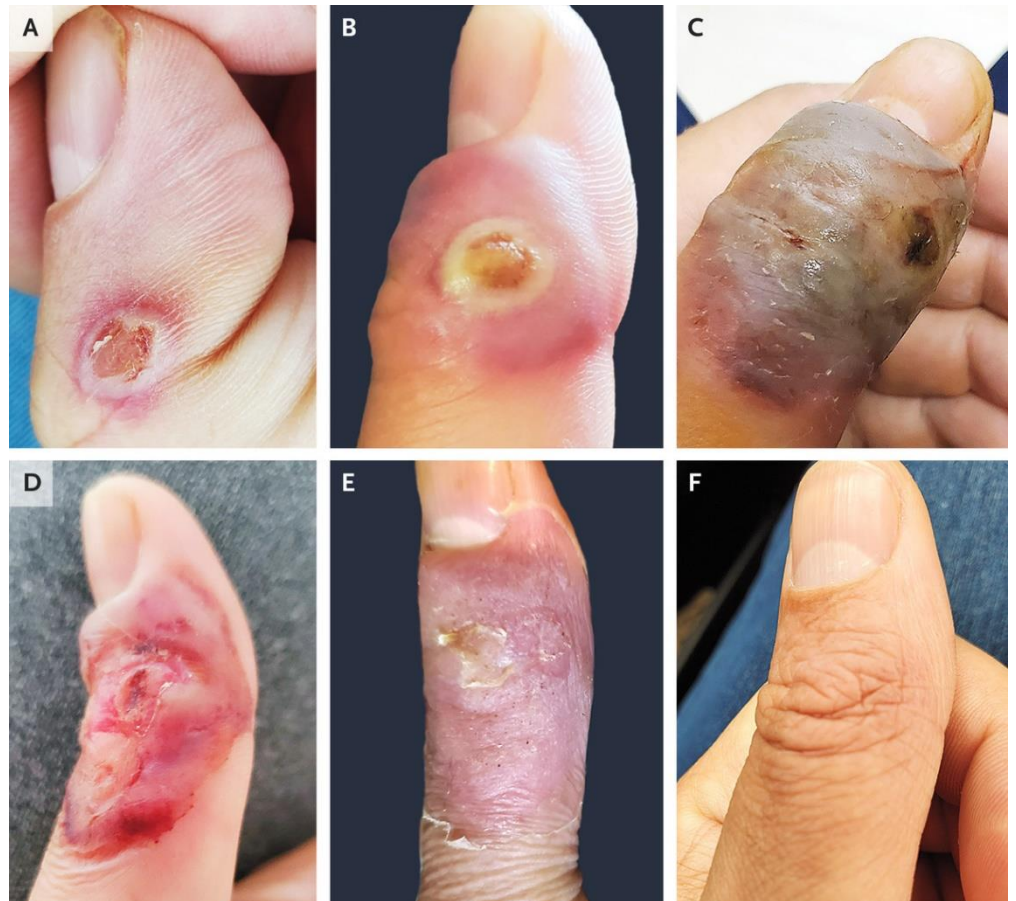
These findings suggest that ciKMC practice may substantially reduce the risk of moderate-to-severe maternal postpartum depressive symptoms. This evidence supports KMC as an intervention to be incorporated in essential newborn care programs in low- and middle-income settings.

Source: Sinha B et al. JAMA Netw Open. 2021;4(4):e216040. doi:10.1001/jamanetworkopen.2021.6040.

Orf/ Contagious pustular dermatitis - A Case Report

A 45-year-old man presented to the emergency department with an enlarging lesion on the left thumb. The lesion had first manifested as a targetoid papule 2 weeks earlier (Panel A) and had progressively enlarged (Panel B) without associated pain or sensory deficits. He reported that 3 weeks earlier he had had direct contact with sheep and had been handling meat on a farm. Examination showed an edematous and dusky nodule on the

dorsal surface of the left thumb (Panel C). The lesion was unroofed; bacterial, mycobacterial, and fungal cultures of samples from the lesion were negative. The clinical history of an evolving nodule and direct contact with sheep was consistent with orf.



Orf, also known as ecthyma contagiosum or contagious pustular dermatitis. Orf is the cutaneous infection caused by orf virus, a member of the parapoxvirus genus of poxviruses. Orf virus causes oral infections in sheep and goats and can be transmitted to humans through direct contact. The disease typically

progresses from a targetoid papule to a boggy nodule, which subsequently dries out and resolves without treatment aside from simple wound care. In this patient, the unroofed lesion became less edematous (Panel D) and subsequently flattened and dried over the next 3 weeks (Panel E). At follow-up 6 months after onset of the lesion, his thumb had completely healed (Panel F), with only mild residual skin sensitivity.

Source: Qiu CS et al. N Engl J Med 2021; 384:1552. DOI: 10.1056/NEJMicm2029641.



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