

البحث الرابع بحث مقبول فردي

عنوان البحث :

دليل على كفاءة الجرعات العالية من فيتامين د على حالة الالتهاب الفائق في حالات الإصابة بفيروس كورونا المتوسطة و الشديدة. تجربة سريرية عشوائية

Evidence for the Efficacy of a High Dose of Vitamin D on the Hyperinflammation State in Moderate-to-Severe COVID-19 Patients: A Randomized Clinical Trial

Neven Sarhan 1, Ahmed E. Abou Warda 2, Rania M. Sarhan 3, Marian S. Boshra 3, Gomaa Mostafa-Hedeab 4,*, Bashayer F. ALruwaili 5, Haytham Soliman Ghareeb Ibrahim 6, Mona F. Schaalán 1 and Shaimaa Fathy 1

Abstract: Background and Objectives: Vitamin D supplementation plays a key effect in lowering cytokine storms among COVID-19 patients by influencing the activity of the renin-angiotensin system and the production of the angiotensin-2 converting enzyme. The study was conducted to explore the effect of high-dose intramuscular vitamin D in hospitalized adults infected with moderate-to-severe SARS-CoV-2 in comparison with the standard of care in the COVID-19 protocol. **Materials and Methods:** Two groups of patients were compared in this prospective randomized controlled trial as the vitamin D was administered orally to group 1 (alfacalcidol 1 mcg/day) and intramuscularly to group 2 (cholecalciferol 200,000 IU). One hundred and sixteen participants were recruited in total, with fifty-eight patients in each group. Following the Egyptian Ministry of Health's policy for COVID-19 management, all patients received the same treatment for a minimum of five days. **Results:** A significant difference was recorded in the length of hospital stay (8.6 versus 6.8 days), need for high oxygen or non-invasive mechanical ventilator (67% versus 33%), need for a mechanical ventilator (25% versus 75%), clinical improvement (45% versus 55%), the occurrence of sepsis (35% versus 65%), and in the monitored laboratory parameters in favor of high-dose vitamin D. Moreover, clinical improvement was significantly associated with the need for low/high oxygen, an invasive/non-invasive mechanical ventilator (MV/NIMV), and diabetes, while mortality was associated with the need for MV, ICU admission, atrial fibrillation, chronic obstructive pulmonary disease, asthma, and the occurrence of secondary infection. **Conclusions:** Our study showed that high-dose vitamin D was considered a promising treatment in the suppression of cytokine storms among COVID-19 patients and was associated with better clinical improvement and fewer adverse outcomes compared to low-dose vitamin D.

عميد كلية الطب جامعة الفيوم
إد حمدي إبراهيم

رئيس قسم القلب و لأوعية الدموية
إد خالد الخشاب.