Enoxaparin sodium

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Lack of efficacy: case report

A 59-year-old man exhibited lack of efficacy with enoxaparin sodium while being treated for prevention of thrombosis.

The man was hospitalised for progressive respiratory symptoms on 24 March 2020. Twelve days prior to hospitalisation, he experienced fever and sore throat. Due to these symptoms nasal and pharyngeal swab test was performed for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which revealed positive results. Based on these findings, he was diagnosed with coronavirus disease-2019 (COVID-19) and immediately treated with off-label IV tocilizumab 600mg. Twelve hours after the first dose, no improvement was noted. Therefore, second dose of tocilizumab was administered. His condition progressively deteriorated. Subsequetly, he was shifted to an ICU and continuous positive airway pressure (CPAP) through helmet along with prone position was attempted initially. However, his condition had not improved. Therefore, he was immediately intubated and placed on protective invasive mechanical ventilation (iMV), in volume-controlled mode, with continuous infusion of rocuronium bromide [rocuronium]. Despite fluid resuscitation, his mean arterial BP was < 65mm Hg (hypotension), due to which he was administered norepinephrine. One hour after the iMV, a moderate improvement in oxygenation was noted. Thereafter, he was also diagnosed with *Klebsiella pneumoniae* and *Candida albicans* infection. He was treated with meropenem and linezolid as an empiric antimicrobial therapy in addition to off-label COVID-19 treatment with hydroxychloroquine 200mg three times daily and azithromycin 250mg once daily. Also, he received SC enoxaparin sodium [enoxaparin] 8000IU twice daily for the prevention of thrombosis. However, despite this treatment he developed thrombosis of femoral and jugular veins without signs of pulmonary embolism during ICU admission (lack of efficacy). Additionally, due to deterioration of kidney function, continuous renal replacement therapy was performed. At day 8 of the ICU admission, his condition improved. He was extubated and weaned-off from the iMV through helmet noninvasive ventilation (NIV) in a proportional mode to increase the success rate, and improve his ventilator interaction. After 48 hours, he was weaned off from NIV. Thereafter due to perihepatic effusion laparotomic cholecystectomy was performed. During the surgery, SARS-CoV-2 swabs test were performed on bile, perihepatic fluid and rectum, which revealed negative results. The day after surgery, he was extubated, and his condition improved progressively till day 44, and he was discharged to a COVID-19 ward. Later, based on various laboratory investigation, he was diagnosed with vasculitis of the gallbladder. Also, it was noted that COVID-19 caused ischaemic gangrenous cholecystitis.

Bruni A, et al. Histopathological findings in a COVID-19 patient affected by ischemic gangrenous cholecystitis. World Journal of Emergency Surgery 15: 2 Jul 2020. Available from: URL: http://doi.org/10.1186/s13017-020-00320-5

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