

Multiple drugs

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Rectal bleeding and off label use: case report

In a case series of 5 patients, a 52-year-old man was described, who developed rectal bleeding during treatment with heparin for thrombotic coagulopathy. Additionally, the man received off-label treatment with ceftriaxone, azithromycin, hydroxychloroquine and alteplase for COVID-19 [*not all routes and dosages stated*].

The man, who had aortic valve disease, Hodgkin's lymphoma and hyperlipidaemia, presented to a community hospital with a 4-day history of shortness of breath, fatigue, fever and body ache. On presentation, he showed hypoxia with an oxygen saturation of 82% on room air. His oxygen saturation improved to 100% following delivery of oxygen therapy via a non-rebreather mask. A chest radiograph showed bilateral infiltrates. Investigations revealed the following: fibrinogen 836 mg/dL (peaked at 1070 mg/dL on hospital day 4), D-dimer 843 ng/mL, INR 1.2, partial thromboplastin time 27.8 seconds and platelet count 265 K/ μ L. The test results were suggestive of thrombotic coagulopathy. He was immediately transferred to a tertiary care center for further management. Upon arrival, his oxygen saturation was 82%. As a result, he was intubated, sedated and placed on mechanical ventilation. A diagnosis of COVID-19 was confirmed by PCR analysis. He received off-label treatment with ceftriaxone, azithromycin and hydroxychloroquine. A therapeutic heparin drip was also started. By hospital day 3, he was also chemically paralyzed. On hospital day 6, his respiratory failure had continued to progress with P/F ratio of 97, and he was placed in the prone position with recovery of P/F ratio to >100. By hospital day 12, his P/F ratio was consistently <100, despite prone positioning and maximal ventilator strategies. In view of profound, medically refractory COVID-19 associated respiratory failure, he received off-label treatment with IV bolus of alteplase 50mg for 2 hours. During the IV bolus of alteplase, his heparin drip turned down to 500 U/h [*initial dosage not stated*]. After the IV bolus of alteplase was completed, heparin drip was resumed at a therapeutic rate. At 24 hours post-the IV bolus of alteplase, his P/F ratio had improved, and he was returned to the supine position shortly after. At 60 hours post-the IV bolus of alteplase, he developed some rectal bleeding, which was considered due to the prolonged presence of a rectal tube and the ongoing therapeutic heparin drip.

Due to the rectal bleeding, the man underwent transfusion of a single unit of packed RBCs. Heparin drip was temporarily discontinued. He was subsequently re-started on heparin without any further complication.

Barrett CD, et al. Rescue therapy for severe COVID-19-associated acute respiratory distress syndrome with tissue plasminogen activator: A case series. *The Journal of Trauma and Acute Care Surgery* 89: 453-457, No. 3, Sep 2020. Available from: URL: <http://doi.org/10.1097/TA.0000000000002786>

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