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**Drug resistance: case report**

In a case series, a 66-year-old man (case 1) was described, who developed drug resistance during treatment with heparin for coronavirus disease-2019 (COVID-19)-associated pulmonary thromboembolism (PTE).

The man was admitted to the interdisciplinary intensive care unit (ICU) for rapidly progressive dyspnoea and swelling of the right thigh. He tested positive for SARS-CoV-2. Eventually, he was diagnosed with COVID-19-associated PTE. Subsequently, an angiographic ultrasound enhanced lysis was performed with infusion of recombinant tissue type plasminogen activator (r-tPA) and heparin 800–1200 IU/h [*route not stated*]. After 24 hours of ICU admission, his dyspnea and preexisting hypoxemia worsened. Non-invasive ventilation showed no improvement in the respiratory condition. His haemodynamic situation deteriorated rapidly following intubation. A CT scan revealed progression of the PTE. Drug resistance to heparin was noted. Over the next days, he developed progressive multi-organ failure. On day 6, he died due to therapeutic refractory shock and multi-organ failure, despite maximal supportive therapy.

Sakr Y, et al. The clinical spectrum of pulmonary thromboembolism in patients with coronavirus disease-2019 (COVID-19) pneumonia: A European case series. *Journal of Critical Care* 61: 39-44, Feb 2021. Available from: URL: <http://doi.org/10.1016/j.jcrc.2020.09.021> 803518594