

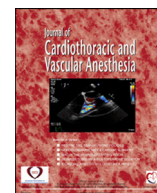


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Diagnostic Dilemma

Giant Retroperitoneal Hematoma During Extracorporeal Membrane Oxygenation in a Patient With Coronavirus Disease-2019 Pneumonia

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Key Words: extracorporeal membrane oxygenation; coronavirus disease-2019; COVID-19; coronavirus-2019 pneumonia; retroperitoneal hematoma

A 71-YEAR-OLD man was admitted to the intensive care unit because of severe bilateral pneumonia resulting from coronavirus disease-2019. His chief complaints were persistent fever, cough, and shortness of breath. Thoracic computed tomography showed bilateral multiple ground-glass opacities. An arterial blood gas analysis demonstrated a low oxygenation index. The patient received high-flow oxygen therapy via a nasal cannula to maintain his oxygen saturation >90%. After receiving supportive care for 2 days, the patient's respiratory function deteriorated further. Endotracheal intubation was performed, but the patient's oxygen saturation remained approximately 70% despite mechanical ventilation with 100% oxygen. Therefore, percutaneous venovenous extracorporeal membrane oxygenation (ECMO) was initiated. Activated partial thromboplastin time was targeted to 60 seconds using a heparin infusion. Progressive hypotension without apparent cause developed 7 days after ECMO was begun. What is the diagnosis?

Diagnosis: Giant Retroperitoneal Hematoma Formation

Acute respiratory distress syndrome and profound hypoxemia are the main causes of death in coronavirus disease-2019 pneumonia.¹ Despite the wide use of mechanical

ventilation with low-volume, low-pressure, and prone position ventilation strategies, the mortality is still as high as 60% in severe cases.² In such situations, ECMO might be a life-saving measure, but it also is associated with hemorrhagic complications.^{3,4} In addition, because of a relatively complex management, various complications may occur during ECMO support.^{5,6}

Abdominal computed tomography revealed a large cystic retroperitoneal mass, with extravasation of contrast consistent with a retroperitoneal hematoma. The patient remained hypotensive despite volume resuscitation with crystalloid and packed red blood cell transfusion. An intravenous infusion of norepinephrine was required to temporize the hypotension, but the serum lactate concentration continued to increase. The right internal iliac artery was occluded successfully in the angiography suite, and his hemodynamics stabilized. After the procedure, he was returned to the intensive care unit. The patient eventually was weaned from mechanical ventilation and was discharged from hospital 76 days after the procedure.

Figure 1

Conflict of Interest

The authors have no conflicts of interest to disclose.

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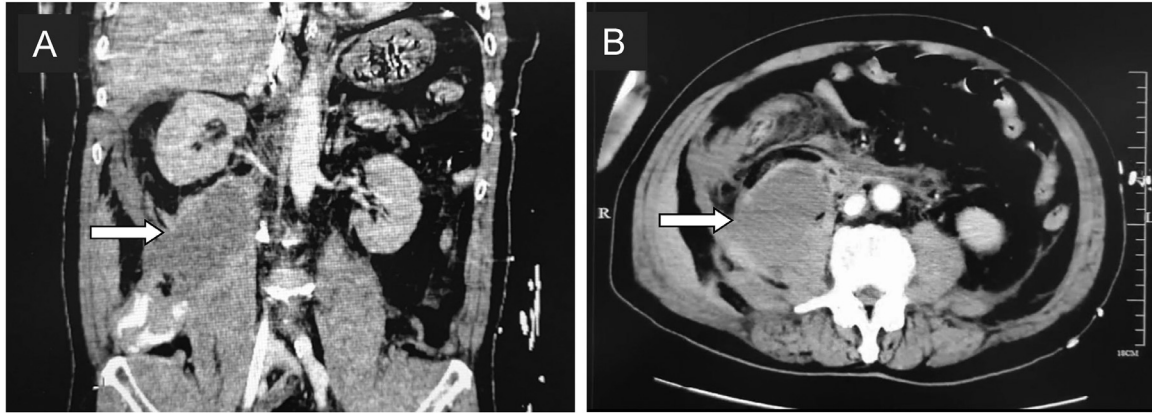


Fig. 1. Computed tomography showing a giant cystic density shadow in the right retroperitoneal renal space, with leakage of contrast medium after enhancement.

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