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Prone positioning induced hepatic necrosis after liver transplantation

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Case report

A 19-year-old woman developed severe pneumonia with ARDS 7 days after a liver transplant. Hypoxemia gradually worsened despite maximal respiratory management and she was turned to the prone position (PP) for 16 h. During PP, oxygenation dramatically improved. PEEP was slightly increased from 9 to 10 cmH₂O and maximal inspiratory pressure decreased from 36 to 27 cmH₂O. Doses of norepinephrine (0.11 mcg/kg/min) were unaffected and pH and lactate levels remained in normal ranges. Next, routine laboratory tests showed an unexpected increase in serum liver enzymes (AST from 84 to 1,934 IU/l; ALT from 234 to 1,538 IU/l). Liver vascular flows assessed by Doppler ultrasonography were normal. An abdominal computed tomography showed extensive necrosis of the anteromedian part of the liver, which did not correspond to a specific vascular territory



Fig. 1 Contrast-enhanced computed tomography of the abdomen performed after 16 h of prone positioning and 9 days after liver transplant showing extensive necrosis of the anteromedian part of the liver. Portal and hepatic veins as well as hepatic artery were normal

(Fig. 1). Topography of the ischemic lesions raises the hypothesis of a link between direct compression during PP and the necrosis. No sign of liver failure occurred and transaminase levels rapidly normalized. The patient's condition gradually improved allowing extubation and discharge from ICU 28 days later. Prone positioning improves oxygenation in ARDS; however, clinicians should be aware of the potential risk of liver ischemia in liver transplant recipients.

Conflicts of interest None to declare.