Influence of abdominal obesity on multiorgan dysfunction and mortality in acute respiratory distress syndrome patients treated with prone positioning.

Obesity is a worldwide pandemic, and obese patients face an increased risk of developing acute respiratory distress syndrome (ARDS). Prone positioning (PP) is a frequently used intervention in the treatment of ARDS. There are no data describing the impact of PP on morbidity and mortality in abdominally obese patients. We report our observations in abdominally obese ARDS patients treated with PP. Patients with ARDS (n=82) were retrospectively divided into 2 groups characterized by presence (n=41) or absence (n=41) of abdominal obesity as defined by a sagittal abdominal diameter of 26 cm or more. There was no difference in cumulative time abdominally obese patients were placed in prone position from admission to day 7 (41.0 hours [interquartile range, 50.5 hours] vs 39.5 hours [interquartile range, 61.5 hours]; P=.65) or in overall intensive care unit mortality (34% vs 34%; P=1). However, abdominally obese patients developed renal failure (83% vs 35%; P<.001) and hypoxic hepatitis (22% vs 2%; P=.015) more frequently. A significant interaction effect between abdominal obesity and prone position with respect to mortality risk (likelihood ratio, P=.0004) was seen if abdominally obese patients were treated with prolonged cumulative PP. A cautious approach to PP should be considered in abdominally obese patients.