

Prediction of fluid responsiveness in the beach chair position using dynamic preload indices.

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Hemodynamic instability in the beach chair position (BCP) may lead to adverse outcomes. Cardiac preload optimization is a prerequisite to improve hemodynamics. We evaluated the clinical usefulness of dynamic indices for the prediction of fluid responsiveness in BCP patients under general anesthesia. Forty-two patients in the BCP under mechanical ventilation received colloids at 6 ml/kg for 10 min. Stroke volume variation (SVV), pulse pressure variation (PPV), pleth variability index (PVI), and hemodynamic data were measured before and after the fluid challenge. Patients were considered responders to volume expansion if the stroke volume index increased by $\geq 15\%$. The areas under receiver operating characteristic curves for SVV, PPV and PVI were 0.83, 0.81 and 0.74, respectively ($p < 0.05$), with the corresponding optimal cut-off values of 12, 15 and 10%. SVV, PPV and PVI can be used to predict fluid responsiveness in the BCP under mechanical ventilation.