



## ABSTRACT

**Background:** Dynamic preload indices have shown better predictive value than static indices. One of these dynamic indices is (manually calculated pulse pressure variation). In this study we tested the predictive value of stroke volume variation derived from pulse contour analysis measured by Vigileo /Flo-Trac system in comparison to pulse pressure variation.

**Methods:** Twenty five patients with acute circulatory failure under complete volume control passive ventilation were given 500 ml Hes- steril. Trans-thoracic Doppler echocardiography was used to measure cardiac output before and after fluid bolus and to divide patients into responders and non responders. Patients who had an increase in cardiac index  $\geq 15\%$  were considered responders.

**Results:** Baseline stroke volume variation  $\geq 8.15\%$  was able to predict fluid responders with a sensitivity 100% and specificity 81.8%. Baseline pulse pressure variation  $\geq 10.2\%$  predicted responders with a sensitivity 92.9% and specificity 90.9%. No significant difference was detected between both groups regarding other hemodynamic variables.

**Conclusion :** Stroke volume variation is able to predict fluid responders with a good sensitivity and specificity.

**Key words :** Dynamic indices , fluid responsiveness , pulse contour analysis.