

*Stroke volume measurements obtained by CardioQ
Oesophageal Doppler Monitor and the Vigileo/FloTrac
pulse contour analysis system during fluid challenges in
patients undergoing abdominal surgery.*

Thesis

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Abstract

Background: our aim was to evaluate the degree of agreement between the Vigileo/Flotrac system & ODM in measurement of stroke volume & CO and to investigate the correlation between FTC & SVV for production of fluid response.

Methods: Prospective single centre study on 25 patients admitted to critical care department to undergo major abdominal surgeries. Vigileo/flotrac system was studied and compared to ODM as a reference technique.

Results: An average of 156 paired data of SV and CO were used. The vigileo flotrac monitor produced reliable SVV or prediction of fluid need. Sensitivity 35.7% and specificity 91.3%. However CO x SV measured by Vigileo flotrac compared to ODM shower percentage error 35% & 40% respectively and a bias of 1.1 ± 1.96 L/min and limits of agreement of 2.7-5 L/min for CO measurements.

Conclusion: The precision of SV and CO estimation by Vigileo/flotrac remains insufficient to allow the replacement of the ODM as a reference technique.

Keywords: Vigileo, Pulse contour analysis, fluid challenge, stroke volume, Oesophageo-doppler, cardiac output