

This review of literature highlights the differences between static and dynamic measurements of fluid responsiveness, and proposes a guide to choosing the most reliable methods of ascertaining volume responsiveness individualized to each patient” Jalil and Cavallazzi (2018).

Abstract:

Volume resuscitation is of utmost importance in the treatment of shock. It is imperative that this resuscitation be guided using a reliable method of ascertaining volume status to avoid the ill-effects of hypovolemia while also avoiding those of over-resuscitation. There are numerous tools and methods available in this era to aid the bedside physician in guiding volume resuscitation, many of which will be described in this review of literature.

The methods to assess preload responsiveness are broadly divided into static and dynamic measurements. Static measurements involve ‘snapshot’ estimations of preload. Dynamic measurements rely on fluctuations in heart-lung interactions or a simulated volume challenge to predict whether increasing preload by volume loading will be beneficial. Dynamic measurements are favored over static measurements, however the conditions to be met for most dynamic measurements to be valid leave these methods to be used reliably in a very discrete critically-ill population. This issue is overcome by utilizing maneuvers that have been developed to assess fluid responsiveness that liberalize the conditions required for most dynamic measurements, such as passive leg raising, end expiratory occlusion, and mini-fluid boluses.

This review of literature highlights the differences between static and dynamic measurements of fluid responsiveness, and proposes a guide to choosing the most reliable methods of ascertaining volume responsiveness individualized to each patient.

Reference:

Jalil, B.A. and Cavallazzi, R. (2018) Predicting fluid responsiveness: A review of literature



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and a guide for the clinician. The American Journal of Emergency Medicine. August 13th. .

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