RESEARCH TOPIC CLI16

Hemodynamic Response to the end-expiratory occlusion test to titrate fluid challenge in operating room

Research Area

Medical Area

Clinical Unit name

Intensive Care Unit, Humanitas Research Hospital

Supervisor

Maurizio Cecconi maurizio.cecconi@hunimed.eu
Antonio Messina antonio.messina@hunimed.eu

Abstract

Personalizing fluid administration in high-risk surgical patients is akey issue for minimizing postoperative complications. Fluids are given infusions (for mainteinance) or in bolus (to correct an hemodynamic instability)
Tecnology needed for the study: beat-to-beat continuous cardiac output monitoring for recording hemodynamic variables, by using invasive arterial waveform analysis for recording flow and pressure variables.
Aim: building-up -> testing -> validation of a predicting model to assess the optimal fluid bolus volume in different cohorts of patient. The model is developed considereing baseline charactheristics and changes induced by an hemodynamic test (the end-expiratory occlusion test).

Scientific references

1. Functional hemodynamic tests: a systematic review and a metanalysis on the reliability of the end-expiratory occlusion test and of the mini-fluid challenge in predicting fluid responsiveness

A Messina et al

Critical care 23, 1-16

2. Association between perioperative fluid administration and postoperative outcomes: a 20-year systematic review and a meta-analysis of randomized goal-directed trials in major visceral/noncardiac surgery

A Messina et al.

Critical Care 25, 1-14

3. How can assessing hemodynamics help to assess volume status?

D De Backer et al. Intensive care medicine 48 (10), 1482-1494

4. Mini fluid chAllenge aNd End-expiratory occlusion test to assess flUid responsiVEness in the opeRating room (MANEUVER study): a multicentre cohort study

Messina et al. European Journal of Anaesthesiology| EJA 38 (4), 422-431

Type of contract

Position reserved for employees of IRCCS Humanitas Rozzano (PhD Executive).

Posizione riservata a dipendente di IRCCS Humanitas Rozzano (PhD Executive).

Humanitas University
Via Rita Levi Montalcini, 4
20072 Pieve Emanuele (MI) Italy
Tel +39 0282241 - Fax +39 0282242394
info@hunimed.eu
hunimed.eu
CF 97692990159