

Perioperative Echocardiographic Hemodynamic Parameters and Postoperative Outcome in Pediatric Surgical Patients : Descriptive Observational Pilot Studies



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Abstract

Two pilot observational trials were elaborated, in pediatric patients scheduled for congenital heart diseases surgical repair and in non cardiac pediatric patients (1,2). These studies were undertaken to determine perioperative echocardiographic parameters predictive of postoperative outcomes in terms of morbidity, length of intensive care unit stay (LOSICU), length of mechanical ventilation (LMV), length of hospital stay (LOS), fluid therapy and vasopressor-inotropic therapy.

These echocardiographic hemodynamic parameters will be integrated in two randomized controlled trials (RCT) in pediatric cardiac surgery and in non cardiac pediatric surgical patients (3,4). These RCT will determine the impact of perioperative goal directed fluid and hemodynamic therapy (PGDFHT) on postoperative outcome in children in terms of postoperative morbidity, LOSICU, LMV, LOS, fluid therapy and vasopressor-inotropic therapy. All these clinical trials are part of a Thesis in preparation entitled 'Do goal directed therapies improve postoperative outcome in children ? (Perioperative Goal Directed Fluid and Hemodynamic Therapy ; Transfusion goal directed therapy using viscoelastic methods and enhanced recovery after surgery and Postoperative outcome)'. This Thesis in preparation can be visualized at <http://www.theses.fr/s232762>.

Biography:

Claudine Kumba graduated as a Medical Doctor in 2001 and completed her specialization in Anesthesiology in 2006 at the Free University of Brussels (ULB, Université Libre de Bruxelles), Brussels, Belgium. She has a Pediatric Anesthesia specialization graduation since 2010 from the University of Aix-Marseille, Marseille, France. She has a specialization graduation in Echocardiography applied to Anesthesia and Critical Care from the University of Montpellier 1, 2011-2012, Montpellier, France. She has a Critical Care Medicine specialization graduation since 2014 from the University of Montpellier 1, Montpellier, France. She is preparing her PhD Thesis entitled 'Do goal directed therapies improve postoperative outcome in children ? (Perioperative Goal Directed Fluid and Hemodynamic Therapy ; Transfusion goal directed therapy using viscoelastic methods and enhanced recovery after surgery and Postoperative outcome)' at Université de Paris, University of Paris, Paris, France. She has research interests in Transfusion; Goal directed Fluid and Hemodynamic Therapy; Enhanced recovery after surgery in Pediatric Anesthesia and Critical Care. She is a Medical Doctor in Pediatric Anesthesia and Critical Care in Necker Enfants-Malades University Hospital, in Paris, France, She is a member of the European Society of Paediatric Anaesthesiology (ESPA), the French Society of Anaesthesia and Critical Care (SFAR, Société Française d'Anesthésie-Réanimation) and the French Association for Pediatric Anesthesiologists and Intensivists (ADARPEF, Association d'Anesthésistes et Réanimateurs Pédiatriques d'Expression Française).

Speaker Publications:

- 1) Kumba C, Raïsky O, Bonnet D, Tréluyer JM. Perioperative Echocardiographic Hemodynamic Parameters and Postoperative Outcome in Pediatric Congenital Heart Disease: A Descriptive Observational Prospective Pilot Study Protocol. *Int J Pediatr Neonat Care* ; 2019 ; 5: 160.



- 2) Kumba C, Tréluyer JM. Perioperative Echocardiographic Hemodynamic Parameters and Postoperative Outcome in Pediatric Surgical Patients: A Descriptive Observational Prospective Pilot Study Protocol. Res Pediatr Neonatol. 4(1). RPN 000580. 2019
- 3) Kumba C, Raïsky O, Bonnet D, Tréluyer JM. "Perioperative Goal Directed Fluid and Hemodynamic Therapy with Echocardiography in Pediatric Congenital Heart Disease: A Study Protocol". EC Paediatrics 2019 ; 8(12): 1-7.
- 4) Kumba C, Tréluyer JM. Perioperative Echocardiographic Hemodynamic Parameters and Postoperative Outcome in Pediatric Surgical Patients: A Descriptive Observational Prospective Pilot Study Protocol. Manuscript with pending publication.

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