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Future Perspectives of Enhanced Recovery after Surgery in Children

Claudine Kumba[1-5*]

[*1]*Department of Pediatric Anesthesia and Critical Care, Necker Enfants Malades University Hospital, Assistance Publique Hôpitaux de Paris, Paris Descartes University, University of Paris, Paris, France*

[2]*Pediatric Cardiac and Congenital Heart Disease Intensive Care and Anesthesia Units, Necker Enfants Malades University Hospital, Assistance Publique Hôpitaux de Paris, Paris Descartes University, University of Paris, Paris, France*

[3]*Department of Clinical Research and Pharmacology, Necker Enfants Malades University Hospital, APHP, Paris Descartes University, University of Paris, France.*

[4]*EA 7323 Pharmacologie et Evaluation des Thérapeutiques Chez L 'Enfant et La Femme Enceinte, Université Paris Descartes, Université de Paris, Paris, France*

[5]*Ecole Doctorale 563 Médicaments-Toxicologie-Chimie-Imagerie (MTCI), Université de Paris, Paris, France*

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ABSTRACT

Background: Recently a systematic review and meta-analysis was conducted to determine the impact of Enhanced Recovery after Surgery (ERAS) in children on post-operative outcome.

This study is part of a vast and extended thesis project concerning the impact of goal directed therapies on post-operative outcome in the pediatric population. This trial revealed in 6 non randomized controlled studies in 1620 pediatric patients in appendicetomy, hypospadias and idiopathic scoliosis surgery that these protocols resulted in reduced postoperative complications in terms of reoperations, infections and readmissions. Length of hospital (LOS) stay was also reduced.

Systematic reviews and meta-analysis can be high level evidence studies which can help to elaborate recommendations for improvement implementation programs in daily clinical practice.

Objective: To analyze the results, conclusions and future perspective of this recent systematic review and meta-analysis on enhanced recovery after surgery in children and postoperative outcome.

Methods: Editorial concerning the recent systematic review and meta-analysis of ERAS in children.

Results and conclusion: This systematic review and meta-analysis of non-randomized controlled trials revealed 3 aspects: Firstly, randomized controlled trials concerning ERAS in children are lacking. Secondly, Morbidity and LOS were reduced when ERAS protocols were applied. Thirdly not all types of surgery were included, so the results and conclusions of this trial are based on appendicetomy, hypospadias and idiopathic scoliosis surgery. Randomized controlled trials need to be developed to confirm the results. Nevertheless, ERAS should begin to be put into practice using the existing evidence while waiting for the randomized trials to confirm the impact of these protocols on postoperative outcome in children.

Keywords: Enhanced recovery after surgery, Children

INTRODUCTION

The purpose of systematic reviews and meta-analyses is to find an answer to a particular question which can help to improve clinical practices or to implement improvement in our daily clinical management of patients [1]. The ideal systematic review and meta-analyses comprise well conducted randomized controlled trials and evidence raised from these analyses can guide recommendations of high level evidence which can be used to treat or manage patients. In pediatrics and neonatology, randomized controlled studies are not always easy to realize for several reasons namely the number of patients, informed consent approval, ethical concerns and so on. A lot of trials in these fields are prospective, observational and retrospective. The recent systematic review and meta-analysis on ERAS in children

Corresponding author: Claudine Kumba , Medical Doctor, Pediatric Anesthesiologist and Intensivist at Necker Enfants Malades University Hospital, Tel: +33 1 44 49 40 00, E-mail: claudine.kumba@gmail.com

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[2,3] is part of a vast and extended thesis project concerning the impact of goal directed therapies on postoperative outcome in the pediatric population [4-9].

This systematic review and meta-analysis concerned 6 non randomized trials in 1620 pediatric surgical patients and for this reason the level of evidence of this trial was low.

However, despite this observation, the results of this systematic review are important and promising enough to recommend continuing to develop randomized controlled trials in this field to reappraise and confirm these results in children. While awaiting the development of these studies, ERAS can be put into practice using the existing evidence.

This systematic review concerned appendicetomy, hypospadias and idiopathic scoliosis surgery. If ERAS reduces postoperative complications in terms of infections, reoperations, readmission and LOS in these settings, it is worthwhile to investigate other pediatric surgical specialties to have a more complete view and impact of these protocols in general in pediatric surgery.

CONCLUSION

There is still a lot to be done to develop ERAS in children compared to what has been achieved in adults. Based on this systematic review and meta-analysis, there is enough evidence to encourage the development of randomized controlled trials to appraise and confirm the impact of ERAS on post-operative outcome in children.

CONFLICT OF INTEREST

The author declared no conflict of interest.

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