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**A Retrospective Descriptive Cohort study of Preoperative, Intraoperative and Postoperative Management of children in Scoliosis Surgery****Claudine Kumba**

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**Background:** What is already known: Scoliosis surgery in children is a common intervention in pediatric tertiary centers. These patients depending on the type of scoliosis, idiopathic or neuromuscular or congenital have also severe comorbidities which necessitate management in specialized centers. Blood and fluid loss can be important issues in this setting. Scoliosis surgery has a high rate of postoperative complications. Data exist concerning the importance of goal directed fluid therapy and hemodynamic monitoring to minimize postoperative morbidity in moderate to high risk adult patients undergoing moderate to high risk surgery. Evidence has shown that blood transfusion protocols (based on viscoelastic methods, erythropoietin and iron supplementation) can reduce blood product exposure in this setting. It is known that transfusion is a predictive factor of negative postoperative outcome in children. Rapid enhanced protocols have shown to reduce length of hospital stay and complications in adults. In children these protocols are beginning to develop. What is not known: The impact of intraoperative fluid and hemodynamic goal directed therapy on postoperative outcome in pediatric surgery in general is not known. Objective: The primary objective of this study was to identify postoperative negative outcome predictors in pediatric scoliosis surgery which could be improved by implementing protocols based on existing evidence. Main outcome measures of postoperative negative outcome were complications and transfusion.

**Methods:** Medical records of children admitted for scoliosis surgery were retrospectively analyzed from 1 January 2015

to 8 December 2017 in Queen Fabiola Children's University Hospital, Brussels. Forty-one children with an average age of  $13.15 \pm 2.79$  years were included. Main outcome measures were postoperative complications and transfusion. XLSTAT 2018.3 software was used for statistical analysis.

**Results:** Length of postoperative hospital stay (LOSHOSP) was predictive of postoperative complications and transfusion with an odds ratio of 1.337 [1.048-1.705],  $p=0.019$ . Cobb's angle ( $p=0.002$ ), length of surgery ( $p<0.0001$ ) and length of postoperative  $\alpha 2$  agonists infusion ( $p<0.0001$ ) were independent predictive factors of postoperative transfusion.

**Conclusion:** Implementing improvement protocols aiming to reduce length of hospital stay such as fluid, hemodynamic, transfusion goal-directed therapies and enhanced recovery pathways may upgrade postoperative outcome in pediatric scoliosis surgery.

**Speaker Biography**

Claudine Kumba graduated as a Medical Doctor in 2001 and completed her specialisation in Anaesthesiology in 2006 at the Free University of Brussels (ULB, Université Libre de Bruxelles). She has a Paediatric Anaesthesia specialisation graduation since 2010 from the University of Aix- Marseille, Marseille, France. She has a Critical Care Medicine specialisation graduation since 2014 from the University of Montpellier 1, Montpellier, France. She is a paediatric anaesthesiologist in Necker Sick Children's University Hospital, in Paris, France. She has 12 publications and 17 citations. 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 Paediatric Anaesthesiologists and Intensivists (ADARPEF, Association d'Anesthésistes et Réanimateurs Pédiatriques d'Expression Française) and the Belgian Association for Paediatric Anaesthesiology (BAPA).

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