

International Conference on  
PEDIATRICS & NEONATAL HEALTHCARE

March 14-15, 2019 | London, UK

**Blood product transfusion and postoperative outcome in Pediatric Neurosurgical patients**

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**Background:** Intraoperative and postoperative Morbi-mortality factors are multiple in pediatric patients. Studies in pediatric cardiac surgery and intensive care patients have identified transfusion one factor among others. This study was undertaken to investigate whether transfusion was a risk factor of postoperative outcome in neurosurgical pediatric patients.

**Objectives:** To identify Morbi-mortality risk factors in intraoperatively transfused and not transfused pediatric neurosurgical patients.

**Design:** Retrospective observational descriptive pediatric cohort study.

**Setting:** Monocentric pediatric tertiary center, Necker Enfants Malades University Hospital Paris, from 1 January 2014 to 17 Mai 2017.

**Patients:** 206 patients with a median age of 60 months [13.25-135.75] were included. Inclusion criteria were the presence or the absence of transfusion in the intraoperative period in neurosurgery patients. Exclusion criterion was transfusion in the postoperative period until discharge from hospital.

**Main outcome measures:** Primary outcome was mortality and secondary outcome was morbidity in transfused and non-transfused patients. Mortality was assessed by deaths occurring intraoperatively or postoperatively during the entire hospitalization. Morbidity was assessed by intraoperative,

postoperative complications, repeat surgery, length of stay in the intensive care unit, in the hospitalization ward, total length of stay in hospital and length of mechanical ventilation.


**Results:** ASA score status (odds ratio 2.49; p-value <0.01) and transfusion (odds ratio 1.33; p-value 0.03) were predictive risk factors for complications. Emergency surgery (odds ratio 6.8; p-value 0.03) was a predictive risk factor for repeat surgery. ASA score, transfusion and emergency surgery were predictive risk factors for length of stay in the intensive care unit, total length of stay in hospital and length of mechanical ventilation (p-value<0.0001)

EC Anaesthesia 2018; 4(8): 288-298.

**Speaker 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). 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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