The outcome of preoperative transfusion guideline on sickle cell disease patients at King Fahd Hospital, Jeddah, KSA

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Background: We developed a local hospital preoperative transfusion guideline for sickle cell disease (SCD) patients to reduce the perioperative and the postoperative complications. This study was conducted to evaluate the outcome of clinical practice on SCD patients undergoing surgeries in our institution.

Methods: A retrospective review of 75 SCD patients undergoing surgery at King Fahd Hospital, Jeddah, Saudi Arabia was conducted between April 2005 and May 2010. The medical records were reviewed to define the perioperative risks and the postoperative complications in relation to the type of transfusion modality selected.

Results: The medical records of 75 SCD patients who underwent surgeries were reviewed. Preoperatively, 25.3% had complete exchange transfusion (CETX), 17.3% had partial exchange transfusion (PETX), 26.7% had simple top up transfusion (STX) and 30.7% did not require transfusion (NTX). The postoperative complications included vaso-occlusive crises (VOC) in 20%, acute chest syndrome (ACS) in 2.7% and fever in 16% cases. 33.3% patients required the prolonged period of the hospital stay. In patients of our study, postoperative fever, VOC, ACS and the length of hospital stay did not show any difference regardless of types of transfusion modalities. However, the correlation was highly significant between the pre-operative hemoglobin (Hb) level and postoperative fever (P<0.01) and VOC (P<0.01). Interestingly, SCD patients who received hydroxyurea had less postoperative complications such as fever (P<0.05) and vaso-occlusive crises (P<0.05), while those who received prophylactic heparin in the postoperative period had a reduced length of hospital stay (P<0.01) and vaso-occlusive crises (P<0.01).

Conclusion: The guidelines for preoperative transfusion in SCD patients were effective in reducing the postoperative morbidity and mortality. Moreover, this guideline emphasizes the surgical situations where preoperative transfusion is needed and optimum regimen is required for different surgical sub-types.

Biography

Sameera M Refaie Felemban has completed her MRCPath training in Hematology and Blood Bank in 2000 from KAUH in Jeddah in collaboration with Saint Mary’s Hospital and Hammer Smith Hospitals in London, UK. She works as a Director of Transfusion Medicine since 2003. She has completed her Master’s degree of Hemoglobinopathy in 2012. She has participated in local and international meetings in the field of transfusion medicine, hemoglobinopathy and in research methodology. She is currently working as Transfusion Medicine Specialist at King Fahd Hospital in Jeddah.

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