

The outcome of preoperative transfusion guideline on sickle cell disease patients at king fahd hospital-jeddah (ksa)

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Background: We have developed local hospital transfusion guidelines to reduce and prevent the perioperative and the postoperative complications. This study was conducted to evaluate the outcome of practice for preoperative transfusion therapy in SCD patients in our institution.

Methods: A retrospective review of 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 record of 75 sickle cell disease patients in whom the hematologists were consulted for their preoperative assessment. 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 % had no transfusion (NTX). The postoperative complications were 20% vaso-occlusive crises (VOC), 2.7% acute chest syndrome (ACS), and 16% had fever. The mean duration for the hospital stay was 7.36 with SD of 5.83. There was no significant difference in the outcome between all types of transfusion modalities, the P value was (p 0.245), (p 0.282), (p 0.133), (p 0.220) for postoperative fever, VOC, ACS, and the length of hospital stay, respectively. However, the correlation was highly significant between the post-transfusion haemoglobin (Hb) level and the occurrence of postoperative fever (p 0.01) and VOC (p 0.03).

Interestingly, SCD patients who received hydroxyurea were observed to have less postoperative complication like fever, and the result was highly significant (P<0.01), while those who received prophylactic heparin in the postoperative period were found to have 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. However, the selection of the optimum regimen for different surgical types in sickle cell disease patients and the surgical situations where preoperative transfusion is needed were all established in this guidelines

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