

Evaluation of a New Automated Red Cell Exchange Procedure in Routine Use

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Purpose: Red Blood Cell Exchange (RBCx) is used to remove abnormal or excess red blood cells (RBCs) from patients and exchanging them for healthy donor RBCs and/or crystalloid or colloid solutions to maintain fluid balance. The removal of abnormal RBCs and replacement with healthy donor RBCs is used in the treatment of patients with complications of sickle cell disease (SCD) to lower the percentage of hemoglobin S (HbS) present in the body and prevent stroke. In 2016, a new CE marked device became available for automated red cell exchange, the AMICUS Separator with software version 5.1 (Fresenius Kabi, Lake Zurich, IL, USA). The procedure was evaluated by measuring fraction of cells remaining (FCR) accuracy and end hematocrit (Hct) accuracy in adult patients.



