

- The alert system involves recording the occurring of different events.
- Documentation of each event that occurred during or after the transfusion therapy in the patient's file
- Documentation of name of the medical person, who performed the procedure and was responsible for it, in the patient's file.

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THE IMPLEMENTATION OF RESTRICTIVE STRATEGY FOR PRBCS TRANSFUSION IN TREATMENT OF CARDIAC SURGERY PATIENTS

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Introduction: Individual and institutional practices remain an independent predictor factor for allogenic blood transfusion.

Aim: The implementation of a restrictive transfusion strategy for PRBCs in cardiosurgery patients and reduce the risks associated with transfusion of allogenic blood.

Material and Methods: Retrospective analysis in use of allogenic PRBCs (packed red blood cells) in 380 patients undergoing non emergent cardiac surgery: coronary artery grafting, valve replacement, aortic reconstruction and complex operations. Our transfusion policy was based mainly on clinical judgment, not only on a specific hemoglobin concentration, but also the physical status of the patient (age, estimated blood volume, cardiovascular and respiratory functions) and the extent of postoperative bleeding. Postoperative blood loss was evaluated by measuring the mediastinal chest tube drainage. Packed red blood cells (PRBCs) were added to the pump when the hematocrit was below 25 %. A cell saver device was usually used for aortic reconstructions. Patients with hemoglobin concentration below 80 g/l were usually transfused, while patients with hemoglobin above 100 g/l were never transfused. Oral iron therapy was administrated when hemoglobin was below 90 g/l (before that we measured the level of iron in the patient's serum). **Results:** In coronary artery grafting group (228 patients), 45.30% of patients recived PRBCs (average 1.82 units per patient). In valve replacement group (38 patients), 61.36% of patients recived PRBCs (average 2.42 units per patient). In complex operations group (101 patients), 61.39% of patients recived PRBCs (average 2.37 units per patient). In aortic reconstruction group (13 patients), 77 % of patients recived PRBCs (average 2.50 units per patient). There is statistically significant difference ($p<0.05$), between the patients who recived PRBCs and patients who didn't recive PRBCs comparing the coronary artery grafting group and the other groups of patients.

Conclusion: All our patients had satisfactory early and delaid postoperative recovery. The implementation of a standardized multidisciplinary transfusion strategy, markedly reduced the exposure of our patients to allogenic blood.

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IMPROVING BLOOD TRANSFUSION PRACTICE IN A DISTRICT GENERAL MATERNITY UNIT

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Introduction: In 2003, the Better Blood Transfusion Programme (BBTxP) was launched to improve transfusion practice in Scotland. A hospital audit identified an unacceptably high crossmatch to transfusion (C:T) ratio for maternity patients. We undertook an audit to determine crossmatch and blood use in maternity patients to improve transfusion practice.

Methods: From January to May 2004 (Phase 1), all patients cross-matched were identified prospectively from computerised laboratory records. The casenotes were reviewed and indications for crossmatch-

ing and/or transfusion were determined. A transfusion education programme, based upon the BBTxP, and a revised maximum surgical blood ordering schedule, were launched in May 2004 and the audit repeated in June to December 2004 (Phase 2).

Results: In Phase 1, 256 patients were crossmatched for 384 units (mean 1.5 [SD 1.2]). During Phase 2, 88 women were crossmatched for 234 units (mean 3.0 [SD 1.2], $p<0.001$). In each Phase, the main indications for crossmatch were (i) anticipated blood loss (83.6% vs 22.5%), (ii) obstetric haemorrhage (9.4% vs 37.1%) and (iii) anaemia (7.8% vs 31.5%). Phase 1 C:T ratio was 5.3:1 vs 2.6:1 in Phase 2 ($p<0.001$). Clinical activity was constant throughout the year. Average units ordered fell from 76.8 per month (Phase 1) to 33.4 (Phase 2).

Discussion: The lower C:T ratio indicates that transfusion practice has improved in our unit, with reduction in the laboratory workload and increased availability of blood for general stocks. This improvement was achieved mainly by reduction in crossmatching patients at low risk of bleeding.

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HAEMOVIGILANCE: DETECTION OF ADVERSE REACTIONS ASSOCIATED WITH BLOOD TRANSFUSION

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Background: Hemovigilance is organisation of surveillance procedure related to serious adverse or unexpected events or reaction in donor or recipients and the epidemiology follow up donors (Guide to the preparation, use and quality assurance of blood components, 12th edition). Adverse reaction are documented, investigated and analysed on Dept. of Blood Banking Faculty Hospital, Ostrava. We report summary of events during three years (2003 - 2005).

Materials and Methods: During 36 months 39.900 units red cells including leukocyte-depleted, approximately 50.000 plasma units and 800 platelets apheresis mostly leukocyte depleted (90.700 blood transfusion units together) were prepared for patients of our Faculty Hospital. Post-transfusion reactions as well as adverse reactions should be documented and investigated according to GMP, serious post-transfusion reactions have to be reported to the Czech State Institute for Drug Control in Prague.

Results: 113 adverse post-transfusion reactions (0.12%) in 59 men and 54 women (age 64.6 ± 16) were documented and analysed during 3 years on our Dept. of Blood Banking. Tbl of adverse reactions

Conclusion: FNHTRs represent the largest part of reported reactions, TRALI is very rare reported complication; however diagnosis of TRALI is very difficult. None serious haemolytic post-transfusion reaction was reported.

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A FATAL CLINICAL DILEMMA MIMICKING AN INTRAVASCULAR HAEMOLYTIC TRANSFUSION REACTION

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Introduction: Intravascular haemolysis is commonly associated with ABO mismatched red cell transfusions. As part of the differential diagnosis and investigation it is always important to consider other causes of intravascular haemolysis including mechanical haemolysis, infections and drug therapy.

Case Report: A 71 year old female with a past history of myocardial infarction presented in cardiac arrest following a massive pulmonary embolism. She was successfully resuscitated and treated with tissue plasminogen activator (TPA) and heparin. During TPA and heparin therapy moderate bleeding was noted from her nasogastric tube and