

Addendum

British Society for Haematology Guideline on Haematological management of major haemorrhage (*Br J Haematol.* 2022;198:654–667)

Laura Green,^{1,2,3} Kerry Dowling,⁴ Nikki Curry,^{5,6} Beverley J. Hunt,⁷ Laura Fraser,⁸ Shruthi Narayan,⁹ Juliet Smith,¹⁰ Ian Sullivan,¹¹ Simon J. Stanworth^{5,6,12}

¹ Transfusion Medicine, NHS Blood and Transplant, London, United Kingdom (UK)

² Blizzard Institute, Queen Mary University of London, London UK

³ Barts Health NHS Trust, London, UK

⁴ Transfusion Laboratory Manager, Southampton University Hospitals NHS Foundation Trust, UK

⁵ Department of Haematology, Oxford University Hospitals NHS Foundation Trust, UK

⁶ Radcliffe Department of Medicine, University of Oxford, and NIHR Oxford Biomedical Research Centre, UK

⁷ Department of Haematology, Guy's and St Thomas's Hospital, London, UK

⁸ Transfusion Practitioner, NHS Lanarkshire, University Hospital Wishaw, UK

⁹ Serious Hazards of Transfusion, Manchester, UK

¹⁰ Laboratory Services, University Hospitals Birmingham NHS Foundation Trust; Queen Elizabeth Hospital Birmingham, UK

¹¹ Transfusion Laboratory, Royal Cornwall Hospitals NHS Trust

¹² Transfusion Medicine, NHS Blood and Transplant, Oxford, United Kingdom

Correspondence:

BSH Administrator, BSH Guidelines Administrator, British Society for Haematology, 100 White Lion Street, London, N1 9PF, UK

Email: bshguidelines@b-s-h.org.uk

This addendum provides an update on the clinical indication for the use of a new blood component, named leucocyte depleted red blood cell and plasma combined (LD-RCP), which aims at delivering a more balanced transfusion resuscitation (Huish, et al, 2019). Use of this component will be available in the UK, enabling a more practical and feasible support for patients with major bleeding in a prehospital setting.

LD-RCP was initially assessed against component therapy (i.e. red blood cells [RBC] plus Plasma) in 2013, as part of a single-centre randomised control trial (total of 107 patients) for traumatic haemorrhage (Cotton *et al.*, 2013). Results showed that compared to component therapy, LD-RCP did not reduce transfusion volumes in severely injured patients predicted to receive massive transfusion (primary outcome). LD-RCP significantly reduced transfusion volumes in patients without severe brain injuries.

More recently, LD-RCP (n = 295) was evaluated prehospitally for treatment of traumatic haemorrhage against standard of care (RBC plus Plasma, n = 391 patients) and RBC only transfusion (n = 223 patients), as part of a multicentre observational study in England (Tucker *et al.*, 2023). The study showed that prehospital transfusion with LD-RCP was safe, and that LD-RCP and RBC plus Plasma were associated with lower odds of death at 24 hours compared to RBC alone (adjusted odds ratio 0.69 [95%CI: 0.52; 0.92] and 0.60 [95%CI: 0.32; 1.13], respectively). There was no association between LD-RCP or RBC plus Plasma with 30-day survival versus RBC (Tucker *et al.*, 2023).

LD-RCP, where available, can be considered for emergency transfusion to any patient with major bleeding (prehospital and in hospital) where treatment with RBC and Plasma is required. A maximum of 4 units (or weight-related equivalent for children) should be transfused for non-group O patients or those patients where blood group is unknown, prior to switching to standard component therapy. There is no maximum dose for group O patients.

References

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