

Position statement

Subject: Preoperative Autologous Donation (PAD)
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The routine use of PAD is not recommended because, although it reduces the risk of allogeneic RBC transfusion, it does have a number of risks associated with the process of collecting and transfusing autologous blood. PAD should only be used in exceptional circumstances e.g. rare blood group antibodies where transfusion requirements cannot be met with allogeneic blood.

The ANZSBT supports recommendations 3.6.1 preoperative autologous donation (PAD), contained within the perioperative Patient Blood Management guidelines[1].

Given the current remote risk of viral transfusion-transmitted infection from donor blood in developed countries, the rationale, safety and cost-effectiveness of routine pre-operative autologous donations (PAD) has been questioned and the procedure is now uncommon.

PAD is not risk free[1,2,3,4]:

- PAD may reduce exposure to allogeneic red blood cell (RBC) transfusion, however it does increase the risk of receiving any RBC transfusion (allogeneic and autologous)
- it carries the same risks associated with donation
- it carries some of the same risks of allogeneic blood e.g. bacterial contamination; clerical and human errors, including wrong blood into patient episodes due to identification errors at collection from the blood bank or at the bedside, and febrile reactions
- the availability of autologous blood may increase the risk of unnecessary transfusion
- it increases the risk of preoperative anaemia that is associated with worse outcomes (compared to non-anaemic surgical patients)

PAD results in excessive wastage of collected units (evidence suggests 50%)[5]. Clinical trials of PAD are mainly small and of low quality and do not provide strong evidence that the risks outweigh the benefits[6].

The Australian Red Cross Blood Service has revised its policy on routine PAD collection, only providing a collection service for exceptional circumstances such as for a patient with a rare blood group or multiple red cell antibodies whose transfusion requirements cannot be met with allogeneic blood.

The New Zealand Blood Service also offers this service in exceptional circumstances e.g. rare blood group antibodies but might impose a charge to meet the full costs of providing the service for other situations.

References

- 1 Patient Blood Management Guidelines: Module 2 Perioperative. <http://blood.gov.au/pbm-guidelines>, accessed November 2014.
- 2 Henry, DA, Carless, PA, Moxey, AJ, et al. Pre-operative autologous donation for minimising perioperative allogeneic blood transfusion. Cochrane Database of Systematic Reviews. 2001, assessed as up-to-date 2009.
- 3 Patient blood management in elective orthopaedic surgery 2009 revised, Blood Matters Program, February 2012, Quality, Safety and Patient Experience Branch, Victorian Government, Department of Health, Melbourne, Victoria, www.health.vic.gov.au/bloodmatters/pubs/reports, accessed November 2014.
- 4 British Committee for Standards in Haematology, Transfusion Task Force, F. E. Boulton and V. James. Guidelines for policies on alternatives to allogeneic blood transfusion. 1. Predeposit autologous blood donation and transfusion. *Transfusion Medicine* 2007; 17(5), 354–365.
- 5 Brecher ME, Goodnough LT. The rise and fall of preoperative autologous blood donation. *Transfusion* 2001; 41 (12).
- 6 Davies L, Brown TJ, Haynes S, Payne K, Elliott RA, McCollum C. Cost-effectiveness of cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: a systematic review and economic model. *Health Technol Assess* 2006;10(44).