

Consensus statement on autologous transfusion*

Royal College of Physicians of Edinburgh

People of the U.K. have been and continue to be well served by their National Blood Transfusion Services. The panel (see Appendix) emphasizes the need to utilize good surgical techniques which minimize blood loss and recognizes the importance of efforts to limit the use of blood to clinical necessity.

Notwithstanding the safety of allogeneic blood transfusion, a number of questions have been raised internationally, particularly in North America and the European Union, suggesting that the supply of blood can be supplemented by autologous transfusion techniques.

It is recognized that all blood transfusions carry risks. Screening of donated blood, however, has greatly reduced the potential risks of transfusion-transmitted diseases. There remains a degree of uncertainty on the immunological effects of allogeneic transfusion.

When used as the sole source of transfused blood, the principal advantage of autologous blood transfusion is the avoidance of the risks of transmitting infectious agents and of potential immunological side-effects of allogeneic transfused blood.

The panel notes the paucity of controlled randomized trials in the evaluation of these procedures and recognizes the need to develop appropriate methodology and outcome measures to determine risk benefit and cost effectiveness.

Provision of services, present and future, should take account of the rights, interests and requirements of patients. Good medical practice requires the disclosure of alternatives as well as risks and benefits.

PREOPERATIVE AUTOLOGOUS DONATION (PAD)

At the present time, in the U.K., there is a low degree of public interest, although the facility of PAD is potentially widely available. In centres which offer this facility, the present take-up is low compared to a take-up rate in America of up to 10%, accounting for 5% of the total blood usage.

Not all patients are suitable and patients must be carefully selected on medical grounds. Eligible patients who undergo elective orthopaedic surgery are the primary target of PAD and it is possible to achieve exclusive use of autologous blood in at least 75% of cases.

A current disadvantage is the difficulty of guaranteeing non-cancellation of routine surgery within the NHS. Other disadvantages include the possibility of cardiovascular accidents following donation. A further concern is that the operation has to be scheduled to allow usually for 1-4 donations at approximately weekly intervals. In some

patients this could be a disadvantage. Although there are practical difficulties associated with the general introduction of PAD in the U.K., we foresee that this practice may become more widespread provided that appropriate resources are made available.

ACUTE NORMOVOLAEMIC HAEMODILUTION (ANH)

The evidence presented suggests that when used alone, ANH has a limited capability for preventing the need for allogeneic blood. We acknowledge that there are potential benefits as well as hazards and that careful evaluation of this technique is essential before it can be recommended for widespread use.

INTRAOPERATIVE SALVAGE (IS)

The clinical benefits of IS become more apparent in surgical procedures with acute blood loss of more than 1000 mL. Blood loss levels below this volume would not support the use of IS, particularly with respect to cost benefit. Provided that a rigid standard operating procedure is in place and the equipment is easily available with appropriate staff training, the side-effects of IS are fewer than those associated with allogeneic transfusion. An increasing body of evidence indicates that this procedure can substantially reduce the need for allogeneic blood.

FUTURE DIRECTIONS

Further work in the development of appropriate blood substitutes and agents to enhance haemostasis will help to reduce the need for allogeneic transfusion. We would also favour the establishment of a national register of adverse events relating to all autologous transfusion procedures.

APPENDIX

Consensus panel

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