

STIR Bulletin Number 2

The “untransfusable” patient: what do I do?

“Untransfusable” patients, or those for whom it is difficult to provide compatible blood components, especially red cells, are infrequently encountered but important to consider as failure to do so may result in catastrophic outcomes. Adequate communication and preparation is the key to safe patient management.

Case scenarios

A young woman presents for hysterectomy and indicates she has stored (frozen) autologous red cell units. A middle age man presents the evening before cardiothoracic surgery and comments about a theoretical risk of anaphylaxis with blood components. In both these real and recent clinical cases, the patient history was delivered to a member of the care team with limited knowledge of the implications of these rare or complex transfusion requirements, potentially compromising patient safety, the local hospital and the Australian Red Cross Blood Service (the Blood Service).

Patient #1 had rare red cell allo-antibodies, likely to react with the majority of available donor red cells and hence only “compatible” with her own, prior donations. Making stored, frozen autologous red cell units available requires co-ordination of the haematologist/transfusion medicine specialist, expertise of designated scientific Blood Service staff, advanced notice of time to thaw and care to minimise unnecessary wastage of rare units with a much shortened lifespan once thawed (hours).

Patient # 2, with true IgA deficiency and antibodies to IgA, or previous severe allergic reactions to transfusion may require special blood products to reduce their exposure to IgA . Specialist components may include washed red cells (generally available from the Blood Service), and plasma or platelets from recruited IgA deficient donors, requiring 1-2 weeks prior notification.

Reducing blood component/product exposure reduces the risk.

Patient blood management strategies are pivotal in these circumstances. Consideration of haemoglobin optimisation, operative and anaesthetic plans for blood loss minimisation and cell salvage, as well as adequate education of all staff involved in pre-, intra- and post-operative care, including the laboratory haematologist and transfusion laboratory scientists, is required to assure patient safety, to provide correct blood components and to prevent inappropriate transfusion.

Recommendations

It's not surprising that these complexities would not be well known to most surgeons and many anaesthetists. Risk minimisation can be achieved by implementing a multiple strategy approach including;

1. Identification of at risk patients at the time of incidental immunoserologic testing (transfusion laboratory) or biochemical investigation (undetectable IgA).
2. Utilising patient alert systems in laboratory information services.
3. Referral of identified patients to a haematologist with expertise in transfusion medicine.
4. Education of the patient regarding risk and the need for adequate pre-surgical planning.
5. Provision of written information to present to care team members in the event of elective surgery, describing both appropriate products and pathways to access products.
6. Use of personal medical alert devices.
7. Patient medical record alerts.
8. Attention to blood component consent, taking into account patient relayed information, investigating expeditiously and recruiting support from your local haematologist/pathologist.
9. Attention to blood component requests flagging complex requirements.
10. Attention to blood component prescription indicating correct requirements.

A national, confidential and secure register of patients with complex immunoserological investigations and potentially difficult transfusion support is an aspirational goal of the transfusion community.

We would like to acknowledge the health services that provide reports of reactions, incidents and near misses to STIR, and the medical, nursing, and scientific staff who support and provide expertise to the STIR Expert group.

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