Blood Bulletin

Safety Autologous Alternatives Appropriate

Produced by Northwest Region **Volume 6, Issue 1**

Editors for this Issue:

Julie Yates

Transfusion Practitioner, Warrington and Halton Hospitals NHS Foundation Trust

Email: julie.yates@whh.nhs.uk

Tony Davies,

Transfusion Liaison Practitioner.,

NHSBT / SHOT.

Email: tony.davies@nhsbt.nhs.uk

In this issue:

Acknowledgements:

Grateful thanks to NHS Blood & Transplant for their continued help and support with the production and distribution of this newsletter. Also to the North West & North Wales Regional Transfusion Committee for funding to support printing.

"Prescribing Blood"

The extended role of the Nurse

An emerging extended role of highly qualified nurses/midwives is the skill to provide the clinical decision and written instruction for blood component transfusion.

The terminology of "prescribing" is difficult to avoid, but Blood **Components**, which include;

- Red cells
- Platelets
- Fresh Frozen Plasma (FFP)
- cryoprecipitate

are not considered to be medicines because of a recent amendment in the law. The effect of this amendment was to exclude whole human blood and blood components from a legal definition of medicinal products.

The term 'prescription' legally relates only to medicines listed in the British National Formulary (BNF). For blood components it is a "**written instruction or authorisation to transfuse or administer"**. The legal opinion of the RCN, MHRA and supported by the NMC, makes it very clear that the term prescription legally relates only to medicinal products listed in the British National Formulary (BNF) and thus not to blood components.

Several Trusts within our region have already explored and implemented this extended role for specific nurses and midwives. These include Nurse Clinicians at The Christie NHS Foundation Trust and Clinical Nurse Specialists at Warrington and Halton NHS Trust.

Each hospital have set out specific pre-requisite criteria to undertake this skill and provided extensive transfusion training and development of competencies. Although we are sometime away from understanding if this extended role will improve the safe and appropriate use of blood components, the patient experience can only be enhanced because these Nurses and Midwives work more closely with their patients and are in a position to complete and influence the most appropriate patient pathway.

For further information on extending your role in transfusion please contact your Transfusion Practitioner.

'Hermione Saves the Day'

New Blood Fridge Introduced to Prevent Delays in the Issuing of Blood for Transfusion

Developments in the transfusion process continue to be dominated by changes in electronic equipment and processes. The recent introduction of the Hemonine fridge at the Lancashire Teaching Hospitals NHS Foundation Trust has ensured blood is issued in a more efficient and timely manner to prevent any delays, in this often life saving component, reaching the patient.

The fridge, affectionately christened 'Hermione' (from the Harry Potter gang) by staff using the equipment, was instigated due to environmental difficulties within the hospital. The laboratory is a good 10-15 minutes walk from the Women's Health Unit. When women in child birth bleed there tends to be a sudden and immediate demand on the laboratory to issue blood urgently. During out of hours when only minimal staff are on duty (includes biomedical scientist, porters, nursing and medical staff) issuing and delivering the blood can be a major stumbling block. The introduction of the new fridge has seen blood being issued immediately with no delay in the provision. As a result demand for cross matched units has been reduced and the unnecessary issue and returning into stock of unused units has been kept to a minimum. This benefits the BMS by freeing up precious time.

The Fridge

The fridge is a nine drawer fridge that carries a designated stock of all blood groups individually stored by group and RhD status. The final drawer continues to hold crossmatched units for those patients unsuitable for this type of issue.

Patient Criteria

Any patient with a valid group and screen and who do not have antibodies are eligible for blood being released using the Hemonine. Sample status can be checked within the clinical area using Bank Manager, the laboratory computer system (password required).

The Process

A report indicating the patient's blood group and antibody screen is sent to the clinical area. This form has a 2D barcode allowing access to the fridge. If this patient then bleeds there is no need to contact the laboratory and order the number of units required. The trained member of staff, using the Blood Track kiosk, scans the Group and Screen report at the blood fridge. The patient's details are identified and the drawer with the correct blood group to the patient is opened. No other blood group is accessible. The unit of blood is removed and scanned. A label containing the patient's unique information is printed at the kiosk. The label is attached and the bag and label are then scanned consecutively within 20 seconds to ensure both are compatible. The task is then complete and the staff can return the unit to the clinical area for administration. The process takes approximately a minute and a half.

Future

Initially there was concern that nurses would be unhappy taking on the extra responsibility of labelling blood, however it has been extremely well received as nurses appreciate the reduced delay in obtaining blood units particularly when in an emergency. This successful acceptance has led to the proposed purchase of a 'Hemosafe' fridge that not only stocks blood components but also transfusion products such as Anti-D, Albumin and various clotting Factors. Watch this space!

Near Patient Testing - Thromboelastometry

Thromboelastometry is a form of near patient testing used predominantly in cardiac and liver centres. However over recent years many District General Hospitals have introduced them into their theatre or ICU settings.

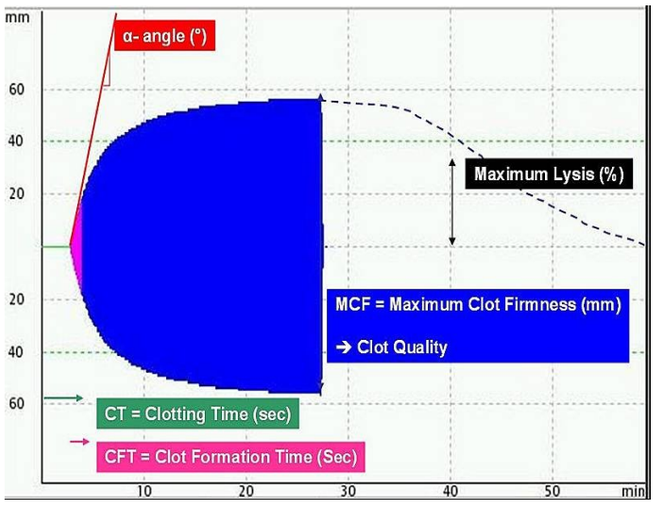
Facts:

- Point Of Care Testing device
- Invented by Professor Hartert in 1948
- Two devices on the market - TEG and ROTEM

What does it do?

- It is a guide to transfusion therapy. The picture obtained tells the clinician which blood component is required e.g. FFP, platelets or cryoprecipitate.
- The results are obtained quickly, reducing the time they have to wait for blood results and allows the correct blood component to be given.

Typical trace:



Kindly supplied by ROTEM UK Ltd)

Parameters:

- Clotting Time: time in seconds for the clot to start to form
- Clotting Formation Time: time in seconds for the clot to become stable
- a-angle: this measures the rate of clot formation in degrees
- Maximum Clot Firmness: thickness in mm of the clot
- Maximum Lysis: gives an indication of the rate of clot break down (%)

Deviations from the predefined values can indicate a reduced or increased risk of bleeding and specific tests can indicate the need for specific blood components e.g. prolonged clotting time indicates the need for coagulation factors such as FFP or PCC, a reduced maximum clot firmness indicates the need for platelets or cryoprecipitate/fibrinogen concentrate.

From RGN to Transfusion Practitioner in One Easy Move?

When asked to write an article, it was a timely request as I am just beginning the second year secondment, as a transfusion practitioner in Ysbyty Gwynedd in Bangor North Wales. it is now one third of the Betsi Cadwaladr University Health Trust and with it no doubt, the cost of both ink and paper has increased to accommodate such a title.

This is my twenty third year as a nurse in which fifteen of those have been spent in oncology and haematology. The later was to me always more interesting and challenging to gain an understanding to the complex condition that patients presented with.

Culture shock is an understatement. I was gently eased into my role by my new "non nurse" manager who was very supportive and my new colleagues from Wrexham and Glan Clwyd which together make the trio of hospitals in the Betsi trust. I think the first time I felt this is going to be ok, was when I had a welcome email from one of these colleagues welcoming me as the third musketeer, proving if only in theory, that maybe I was needed in this new role. I have to break here to mention two important points.

Firstly as a deputy sister I had minimal emails, in fact I could go a week and still catch up with them all within ten minutes, initially, it was so exciting to get emails which increased daily as word got around that I was in post. Now I know after one day there will be between 75+ waiting for me, the excitement I get now is when I have answered them all (nigh on impossible) or at least highlight the ones I need to get back to on the same day.

Secondly I was given a room to myself as my "office" or as the locals laughingly call it "the cupboard" but I am very attached to it, and it will get three people in sideways, as long as they walk in and out in single file. (Guinness book of records have been in touch)

My first TP meeting which I quickly understood was something to do with my job title, was a haze of confusion and feelings of inadequacy, every second sentence I would interrupt to ask "sorry what is that?" "What does that BSQR mean?" "Who are BBT?" All my questions were carefully explained with patience and understanding. I think back to my time in the unit when I confidently told staff that the patient with AML was having a PBSCH and would be starting GCSF next week. Perhaps with time I too, could quote acronyms with such ease and confidence to my new colleagues.

I am glad to say my role as moved from those first tentative steps, I appreciate the importance of educating all I come into contact with, as to the safe practice of blood transfusion, the importance of traceability and adhering to the guidelines and policies which protect and govern us as professionals and our patients.

This year has been a huge learning curve and although I'm only on the first rung of ladder, I look forward to moving upwards, gaining knowledge and experience as I go. This would not be possible without a network of colleagues who offer support and guidance to new team members.

For further information about anything in this edition contact:

Julie Yates, Transfusion Practitioner, Warrington Hospital; email: julie.yates@whh.nhs.uk

Tony Davies, Transfusion Liaison Practitioner, NHSBT; email: tony.davies@nhsbt.nhs.uk