

Newsletter Summer 2022 edition 13

Welcome to the second London Platelet Action Group [LoPAG] Newsletter of 2022. This year LoPAG is releasing a series of Education newsletters. These are intended to be used as helpful guides to appropriate platelet use. Please print them, and discuss them among colleagues.



HLA Q&A

What is HLA?

HLA (Human Leucocyte Antigens) are found on most cells in the body. Your immune system uses HLA markers to see which cells belong in your body and which do not. (N.B. This newsletter will focus on HLA, not HPA, Human Platelet Antigens)

What are HLA antibodies?

They develop in association with exposure to blood products, foreign tissue transplanted, during pregnancy or spontaneously. Most patients receiving platelet transfusions will increment well, however some patients may develop antibodies to HLA.

Who will need HLA matched platelets?

A normal increment post platelet transfusion is $\sim 30 \times 10^9$ /L. If your patient fails to increment for two consecutive transfusions, this is called platelet refractoriness, consider requesting a test for HLA antibodies. If found to be positive, these patients will require HLA matched platelet support. (NB there are other causes for platelet refractoriness – infection, DIC, sepsis)



What are HLA matched platelets?

All HLA matched platelets are apheresis donations from donors who have the same, or nearly the same HLA type as the patient. NHSBT select the best available HLA matched platelet from stock held anywhere in the country.

How do we look after patients requiring HLA matched platelets?

An HLA platelet transfusion should be administered in the same way as a non-HLA transfusion. However, each HLA matched platelet transfusion will be issued to the hospital with a form from NHSBT requesting pre and post transfusion data.

The patient's platelet count must be checked 10-60 mins after transfusion, the form completed and returned to NHSBT.



How does NHSBT monitor HLA matched platelet requests?

NHSBT will not always be able to provide a full HLA match for your patient, which is why post transfusion increment data is essential for NHSBT to provide the most suitable platelets for your patient.

% of HLA Selected orders received more than 24hrs notice vs match grade.



% of HLA Selected orders received less than 24hrs notice vs match grade.



What is 'A-B1' and 'B2-B4'?

An 'A-B1' match is a very close HLA match between the patient and the donor. This is the ideal HLA match for the patient. To allow NHSBT to achieve this, they require at least 24 hours' notice.

A B2-B4 match is a less good match **but** the patient may still increment, which is why it is so important to send the patient's increment data to NHSBT post transfusion (Routine hours are Monday to Friday 08.00 – 18.00 hours (excluding Bank Holidays). Orders for planned transfusions must be placed during these core hours via OBOS.)

Do all hospitals send the post HLA match platelet transfusion increment data?

No. It must be remembered that NHSBT use the increment data to select the most appropriate donor for the patient.

(NB the blue and orange should be equal in the graphs below)



July 2022 Post transfusion counts returned for HLA Selected Platelets

What happens if the HLA match patient receives a non-HLA matched unit of platelets? In an emergency it is acceptable for a patient to receive a non-HLA matched unit of platelets, however it is unlikely that the patient will increment post transfusion. If your patient does require platelets in an emergency, and there is no time to request HLA matched platelets, it is preferable to transfuse pooled platelets.

(LoPAG wishes to thank Kirti Mepani NHSBT for providing the graphs and data for this newsletter)