

IPEX Questions



Blood and Transplant

Lot Number N083 3146	Expiry Date 2026.07.30
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Patient X is a 9-year-old female with Acute Lymphoblastic Leukaemia (ALL) admitted with febrile neutropenia. She received antibiotics and fever improved, but no organisms were identified in blood cultures. Her Hb fell to 70g/L, and while symptomatic a transfusion was requested.

No atypical alloantibodies were detected in the plasma and the DAT was weakly positive (2+ C3d). Two units of IAT crossmatched, blood group compatible red cells were issued. The first unit was taken from the temperature-controlled blood refrigerator and transfused immediately without any adverse reactions. Whilst transfusing the second unit (also transfused immediately from blood refrigerator) the patient showed signs of an acute haemolytic transfusion reaction; high fever, rigors and tachycardia. The patient passed a quantity of dark urine. There was a rise in bilirubin and lactate dehydrogenase (LDH) levels. A blood film showed spherocytosis.

*Patient X's red cells have not been C3d coated in this exercise, therefore if a DAT is performed on this sample it will be negative.

Patient Y is a 38-year-old male with Hodgkin's lymphoma, his Hb is 68g/L and he is symptomatic. He has been transfused four months ago.

Patient Z is a 28-year-old female scheduled for routine surgery. There is no history of transfusions, but the patient has had a previous pregnancy.

Questions

1. Comment on the clinical significance of any antibodies found in samples X, Y and Z.
2. Apart from the serological tests already performed on patient X, what other test should be performed? What is the likely cause of the symptoms?
3. If required, what blood should be selected for these patients? Are there any special considerations?