

## **November 2017 Board: Patient Story - The importance of blood products during treatment**

This month's story is a guest patient story from our charity partner Bloodwise, the blood cancer research charity. Bloodwise aims to stop people dying from blood cancer, makes patients' lives better, and looks for ways to stop blood cancer happening in the first place. They believe that people with blood cancer should be able to live their lives to the full: free from the fear of relapse; free from side effects and free to do the things they love. They'll work to improve their quality of life until blood cancer no longer has an impact.

Bloodwise has been our charity partner since April 2016. Since then, in NHSBT we have raised over £27,000 through initiatives in our centres and mobile teams, as well as colleagues who have signed up to our Pennies from Heaven scheme. This is enough money to support a Specialist Nurse for 9 months to help patients suffering from blood cancer.

### **Natalie's Story**

Natalie is a Senior Biomedical Scientist, working in Blood Transfusion and Haematology. She also has Acute Myeloid Leukaemia, and has required 43 units of blood products during her treatment. This is a short overview of a blog post she wrote in July 2017 of the importance of blood products during treatment for blood cancer. [You can read her full post here](#). Having worked in the profession for over 6 years and having cross matched blood products for numerous patients undergoing chemotherapy, Natalie has always been hugely aware of the importance of blood products and the importance of using them efficiently and effectively.

In 2016 Natalie was working full time, doing on call at weekends, riding a horse three times a week and doing an MSc in Biomedical Science by distance learning. Tiredness was to be expected, she figured. However, when cycling with friends along a canal she was left wondering why she couldn't keep up. A few weeks later the reason became clear with the results of a blood test, her haemoglobin was 80g/l instead of her normal 150g/l. A diagnosis of Acute Myeloid Leukaemia followed.

Her first transfusion, a few weeks later, enabled her to feel well enough to get married prior to her treatment commencing. The two units of red blood cells helped with the breathlessness and tiredness which she had been experiencing. Her next transfusion was given following blood loss during the process of egg harvesting, which she underwent at 28 years of age, as chemotherapy risked affecting her future fertility. She attended hospital on her wedding day as part of this process. The remaining units of red cells were transfused over the three cycles of chemotherapy. She also received platelets during her chemotherapy as support but also for the insertion of her Hickman (central) line, for spontaneous bleeding and bleeding from minor trauma after she was discharged.

The morning in which she was told that she was due to receive a granulocyte infusion was one she will never forget. She was shocked and scared, in the previous six years working as in a transfusion laboratory, no-one had ever issued granulocytes to a patient. She was transfused with 10 units of granulocytes during her first chemotherapy cycle. Transfusion was given despite a raised temperature and rash (indicators of a transfusion reaction) as she was so unwell. Every time she saw the unit of white cells she would panic as she worried about reacting to them and becoming yet more ill. She had a liver infection which had occurred following the egg harvesting procedure, and was unaware, as were the doctors, of the liver abscess, the chemotherapy had left her with no immune system allowing the liver infection to 'take hold'. By borrowing the immune system of blood donors via the granulocyte transfusion, doctors were able to bridge to gap until her own immune system and blood

counts recovered from the chemotherapy and the liver infection could be cleared. She says, 'In hindsight I think the white cells (or rather their donors) probably should take most of the credit for saving my life during my first chemotherapy cycle'.

Since her diagnosis, having received blood, she is no longer able to donate blood, however she encourages friends and family members to donate on her behalf and is keeping a record of their donations to be satisfied when her 'debt' has been repaid. Natalie finishes her blog by saying "I owe a lot to blood donors, not only my job but more importantly my life!"

This story demonstrates the importance of what we, in NHSBT, often consider quite 'ordinary' events, namely the transfusion of blood components. However, the impact of them in allowing time and/or amelioration of symptoms for major events in a patient's life that mean a lot to them, whether this be exams, or a birthday, or, as here, a wedding, should not be underestimated. They also routinely help people get through courses of chemotherapy for blood cancers, thus both saving and improving lives in this group of patients.

Transfusion of granulocytes is less frequent and clinical evidence for their use remains scant, despite clinical cases where they appear to have unequivocally saved lives. NHSBT has recently set up a national registry, with help from NHS doctors prescribing them, to gain more evidence on their use and patient outcomes. This is the ProGrES registry run through our Clinical Trials Unit.