

NHSBT Board Meeting in Public 30 January 2024

Ultrasound Guided Cannulation in Therapeutic Apheresis

Ultrasound-guided (USG) Intravenous (IV) cannulation is a safe, effective alternative to an invasive line insertion for short-term vascular access in patients/donors with poor venous access. This is a common issue within Therapeutic Apheresis and whilst data on the number of patients who would benefit from USGC is not currently held TAS nurses report that this is an issue for approximately 25% of patients.

It is aimed to reduce the number of failed cannulation attempts, increase first-time success rates, reduce the need for central venous catheters, which often require a short operation in theatre to insert them, and as a result to improve patient experience.

Lorraine is a 47 year old lady from Leeds who is waiting for a liver transplant. In the meantime, she requires weekly plasma exchanges (PEX) to manage her condition and maintain her in reasonable health and fit for transplant when it is offered. Obtaining peripheral access to her veins has become increasingly difficult however with the introduction of USG IV cannulation, Lorraine no longer endures multiple needle punctures or requires a central venous catheter inserting. The USGC service has avoided up to 15 central venous catheter insertions. The procedure is able to run smoothly and efficiently, and Lorraine says "I've been coming over the last few months for PEX, I see a big difference as it decreases my itch massively and improved my mood. This helps me as I no longer have open wounds. This proves the benefit of PEX for pruritis. It also helps having a fantastic team of dedicated people looking out for me. 5-star service, 5-star treatment, 5-star team!"



Noel is a 58 year old man from Sheffield who has Sickle Cell Disorder for which he requires monthly Red Cell Exchanges. Unfortunately, over time like Lorraine it has become very difficult to cannulate Noel's peripheral veins which has meant that each time he attends for his Red Cell Exchange procedure he has required a central venous catheter inserted into his femoral vein. Noel describes this process as "a painful and unpleasant experience endured every month and not something I looked forward to having".



Noel now has peripheral lines inserted using the USG technique and describes being so happy with the new procedure as its quicker, requires him to be in hospital for many hours less, is less invasive and less painful. Since the introduction of the USG technique Noel has avoided the need for 5 central venous catheters. It has made a huge difference to his experience of Red Cell Exchange and improved his wellbeing.

Reflections

When peripheral cannulas cannot be inserted then a central venous catheter is required which is a more invasive procedure that can be uncomfortable, time consuming and has increased risks of bleeding, infection and thrombosis.

This innovation, now part of the TAS teams standard service provision in centres, is saving time and resources, increasing efficiency, improving the well-being of patients and reducing inequalities in health related to the impact of failing peripheral veins. Since the project commenced in September 2022 over 500 USGCs have taken place. So far over almost 200 central venous catheter insertions have been avoided and the number grows every day.

We continue to roll out this training across the TAS nursing teams and in future would like to have the equipment to offer this in all hospitals.

Author

Andrew Broderick: Chief Nurse – Clinical Services

Responsible Director

Dee Thiruchelvam – Chief Nursing Officer