



This quality improvement project demonstrated that a successful apheresis procedure can be achieved easily and safely in the majority of PBSC donors preventing the potential adverse events associated with CVCs. The interdisciplinary collaboration between the IV team, apheresis and clinical hematology teams was paramount to optimize the safe care of donors” Ghazi et al (2017).

Abstract:

Peripheral blood stem cell (PBSC) collection from donors through apheresis has become the main source of stem cells for hematopoietic stem cell transplantation. This procedure requires a high blood flow venous access. A peripheral venous catheter (PVC), compared to a central venous catheter (CVC), is considered to provide safer venous access. However, initially at our institution, King Abdul-Aziz Medical City – Riyadh, a CVC was frequently used (72%). A quality improvement multidisciplinary team has been formed to conduct a systematic quality performance analysis to evaluate the current process of collecting donor PBSCs with the aim to reduce CVC use to less than the international benchmark (20%).

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A quality improvement methodology, rapid cycles of plan-do-study-act (PDSA), was used to test a set of initiatives. An Intravenous (IV) team assessed the donor's venous access and inserted an appropriate PVC when feasible. This project ran over 16 months with 42 adult donors undergoing PBSC collection. During the first PDSA cycle, 1 CVC was inserted for every 4 donors. In the second PDSA cycle, 1 CVC was inserted for every 8 apheresis donations. In the third PDSA cycle, no CVC was used for 30 apheresis donations. The targeted stem cell dose was collected successfully in one apheresis session in all donors assigned for PVC access with no complications. A significant reduction of CVC use from 72% to 0% was achieved. This quality improvement project demonstrated that a successful apheresis procedure can be achieved easily and safely in the majority of PBSC donors preventing the potential adverse events associated with CVCs. The interdisciplinary collaboration between the IV team, apheresis and clinical hematology teams was paramount to optimize the safe care of donors.

### Full Text

Reference:

Ghazi, S., Alaskar, A., Alzahrani, M., Damlaj, M., Abuelgasim, K.A., Gmati, G., Alshami, M., Alshammary, S., Al-Surimi, K., Salama, H., Alhejazi, A. and Jazieh, A.R. (2017) Reducing Central Venous Catheter Use in Peripheral Blood Stem Cell Donation: Quality Improvement Report. *BMJ Quality Improvement Reports*. 6(1), eCollection 2017.

doi: 10.1136/bmjquality.u211975.w4817.

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