Exploring Alternative Vascular Access Options for Apheresis in Adults

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Purpose

Optimizing vascular access for therapeutic and donor apheresis through the use of midline and ultrasound-guided peripheral IV (USPIV) techniques

Improves Blood Flow: Ensures adequate inlet flow rates for effective apheresis.

Reduces Patient Discomfort: Minimizes anxiety and discomfort compared to central line placement.

Eases OR Congestion: Provides alternative line placement options.

Patient Convenience: Allows patients to go home with Midline or USPIV for next-day collections.

Decreases Admissions: Reduces the need for hospital admissions.

Cost Savings: Lowers hospital costs.

Background

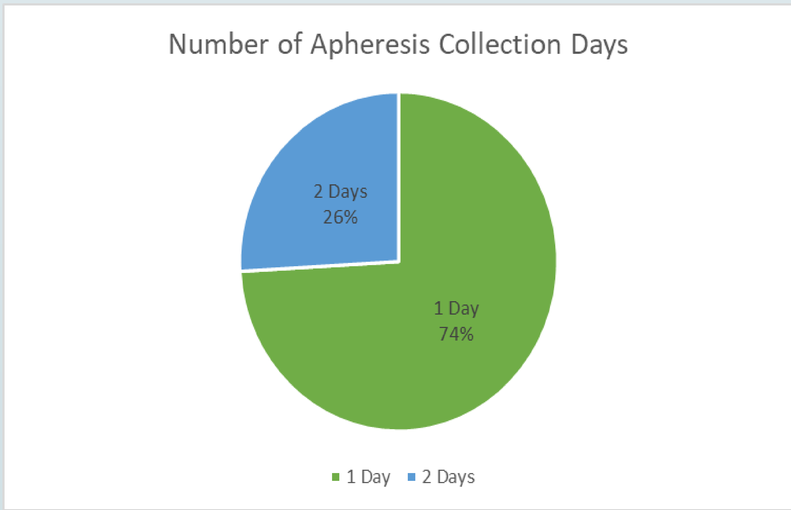
Reliable vascular access is crucial for apheresis. Patients with difficult intravenous venous access (DIVA) frequently endure numerous needle insertions, resulting in unnecessary IV resource use and increased patient trauma. Patients with particularly difficult access may need a central line, which is more invasive, requires general anesthesia, and poses greater complication risks. Furthermore, this patient may need a hospital admission if additional collections are needed. Using Midline Catheter and USPIV can mitigate these risks and decrease associated costs and complications, offering a less invasive and more patient-friendly alternative for difficult vascular cases.

Results

From December 4, 2023 to July 2, 2024:

- **27 patients used Midline and U/S PIV access for apheresis.**
- **All patients achieved the necessary inflow rate without needing central line placement.**
- **Midline and USPIV access proved to be effective and less invasive.**
- **This approach reduced costs and potential complications.**

Type of Vascular Access	Number of Patients
Midline A	6
Midline B	3
U/S PIV	18
Total	27



Conclusion

Efficient and Safe Alternative:

- Midline and USPIV access methods have significantly improved patient care in the apheresis service.
- These methods provide an efficient and safe alternative for vascular access.

Minimizing Central Line Placements:

- The initiative has reduced the need for central line placements in the operating room.
- This reduction leads to substantial hospital savings by avoiding surgical interventions.

Economic and Health Benefits:

- Decrease in hospital admissions and associated costs related to extended stays and complications.
- Emphasizes the economic and health benefits of these less invasive methods.

Support for Broader Implementation:

- Despite the small database and short five-month data collection period, the initiative has proven effective.
- Results support broader implementation and suggest enhancement of the apheresis service through Midline and USPIV placement.