



The use of peripheral venous access is possible in most of TPE, for emergency and during maintenance therapy. Dialysis cannulae are good compromise between classic IV catheters and central venous catheters, as it allows high flow rates, are easy to insert and associated with few complications” Ritzenthaler et al (2018).

Abstract:

BACKGROUND: An efficient vascular access is mandatory for the proper conduction of therapeutic plasma exchanges (TPE). Peripheral and central venous catheters may be used, with respective advantages and limitations. In this study, vascular access devices (IV catheter, dialysis cannula, central venous catheter) and anatomic vein characteristics were evaluated.

METHOD: From January to June 2016, 162 TPE in 29 patients were reviewed. Only TPE using centrifugation method (Spectra Optia apheresis system) were evaluated. Volume exchanged, procedure duration, mean flow rate, number of inlet, and return pressure pauses were recorded. Site, width, and depth of punctured veins were studied.

RESULTS: Median exchange volume planned was 3500 mL, and 152 (94%) procedures could be completed. Peripheral venous catheter was inserted in 103 (64%) cases (IV catheter: 61, dialysis cannulae: 42). Ultrasound guidance was used in 12 (11%) cases. Median procedure

duration was shorter with central venous catheter (94 minutes), rather than dialysis cannula (133 minutes) or IV catheter (133 minutes). Median numbers of inlet pressure pauses were lower with central venous catheter (0) and dialysis cannulae (6), rather than IV catheter (10). There were no complications with peripheral venous access. There were no anatomic differences between catheterized veins with IV catheter or dialysis cannula.

CONCLUSION: The use of peripheral venous access is possible in most of TPE, for emergency and during maintenance therapy. Dialysis cannulae are good compromise between classic IV catheters and central venous catheters, as it allows high flow rates, are easy to insert and associated with few complications.

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Reference:

Ritzenthaler, T., Beraud, M., Gobert, F. and Dailler, F. (2018) Influence of vascular access devices upon efficiency of therapeutic plasma exchange. *Journal of Clinical Apheresis*. November 8th. .

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