



The risk of an acute VA complication could be reduced with appropriate training of nurses, physicians and patients. This could potentially prolong the VA life” Parisotto et al (2016).

Abstract:

Background/aim: Vascular access (VA) cannulation is an essential skill for dialysis nurses: failure to correctly repeat this operation daily may result in serious complications for the patients. This study investigates if different aspects of arteriovenous fistula and graft cannulation have an effect on the development of acute access complications, which may affect the VA survival.

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Methods: In April 2009 a cross-sectional survey was conducted in 171 dialysis units located in Europe, the Middle East and Africa to collect details on VA cannulation practices. Information on cannulation retrieved from the survey comprised fistula type and location, cannulation technique, needle size, use of disinfectants and of local anaesthetics, application of arm compression at the time of cannulation, needle and bevel direction, needle rotation, and needle fixation. Five categories of complications were investigated: multiple-cannulation, infiltration, haematoma, haemorrhage and unknown.

Results: There were 10,807 cannulation procedures evaluated in the same number of patients. Of these, 367 showed some kind of complication, the most frequent (33.8%) being the need for multiple-cannulation. The following were associated with a significantly higher odds ratio for occurrence of an acute complication: prescription of back-eye needles, use of rope-ladder cannulation technique, insertion of venous needle as first needle, and rotation of the arterial needle. Use of 16-17-gauge needles was also significantly associated with complications, but this possibly reflects poor quality of the VA.

Conclusions: The risk of an acute VA complication could be reduced with appropriate training of nurses, physicians and patients. This could potentially prolong the VA life.

Disclosures

Financial support: No grants or funding have been received for this study.

Conflict of interest: All authors are employees of Fresenius Medical Care.

Reference:

Parisotto, M.T., Pelliccia, F., Grassmann, A. and Marcelli, D. (2016) Elements of dialysis nursing practice associated with successful cannulation: result of an international survey. The Journal of Vascular Access. November 9th. .

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