

Applying of rope ladder puncture technique in our dialysis network

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Introduction

For patients with chronic kidney disease in haemodialysis (HD) program, the arteriovenous fistula (AVF) is their "life line". The success of long-term HD treatment depends on the problem-free vascular access.

Objectives

To extend the lifetime and patency of the AVF, to increase the use of rope ladder cannulation technique as the primarily preferred technique to 60% by the end of 2018.

Methods

We implemented our actions plan last spring. An evaluation of puncture technique was performed for every patient to define the most suitable technique. Patients who could have the opportunity to change the technique were selected weekly. The nurses were retrained on the knowledge of puncture techniques (Picture 1, 2.). In all our dialysis clinics, a responsible nurse was designated to check the database and to control the existence of necessary data relating to the assessment, and the head nurses and training nurses were responsible for the proper implementation of prescribed technique.

Results

At the beginning of the survey, we identified the use of rope ladder in 35% of the patients, buttonhole in 15% and area technique in 50%. Following the action plan, rope ladder increased to 58%, buttonhole to 13% and area technique to 29% at the end of November 2018 (Figure 1.).

Conclusion

The appropriate puncture technique is an essential factor in the survival and function of vascular access. Generally, the dialysis nurse is responsible for the puncture, therefore she/he must learn and improve this ability in order to protect the patient from unnecessary pain and discomfort, to ensure the viability of the vascular access, and keep it free from infection and other complications.



Picture 1. The rope ladder technique – own picture

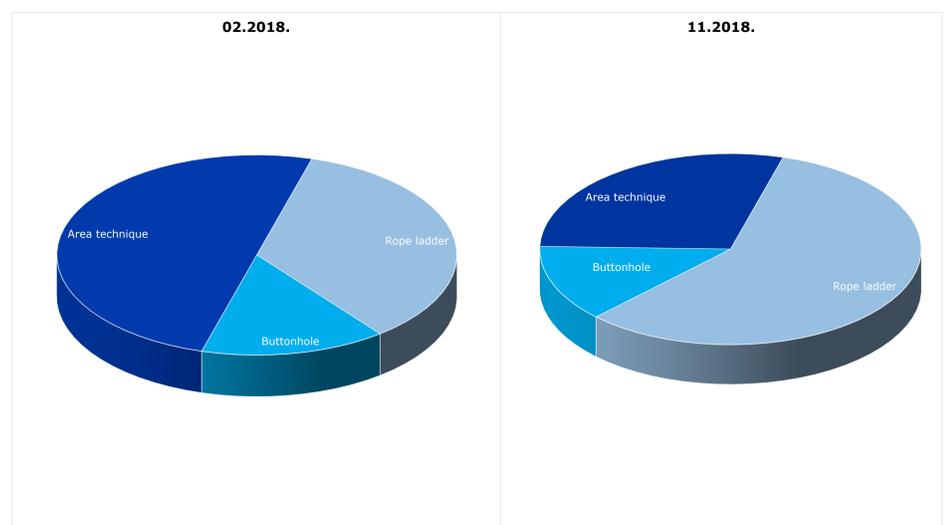


Figure 1. Distribution of puncture techniques in our network in 2018



Picture 2. During training of the puncture techniques – own picture

References

1. Maria Teresa Parisotto – Jitka Pancirova: Vascular Access Cannulation and Care. A Nursing Best Practice Guide for Arteriovenous Fistula. September 2014. p.75-78.
2. http://www.bcrenalagency.ca/resource-gallery/Documents/Rope%20Ladder%20Cannulation%20of%20Fistulas%20and%20Grafts%20Guideline_0.pdf