

INTRODUCTION

The vascular access is the key element to achieve an efficient dialysis treatment. Nowadays the patients receiving hemodialysis are getting older, more vulnerable and with several co-morbidities, which have an impact in the quality of vascular system and therefore a huge impact in the quality of vascular access. The use of an ultra-sound in Hemodialysis Unit is an essential tool. The nurses are able to study the vascular access. The assessment and mapping the vessels by ultra sound prior the first cannulation is crucial.



Figure 1 - Use of ultra-sound by nurses in our unit



Figure 2 - Mapping the cannulation sites



Figure 3 - Assessment and mapping of vessel (vein depth, diameter and length)

METHODOLOGY

Aim:

- To present benefits and limitations during the use of an ultra-sound in Hemodialysis unit.
- To demonstrate the role of the ultra-sound in our practice: marking of puncture sites and selection of puncture technique.

Type of study: simple descriptive and observational.

Study sample: Patients on haemodialysis in Diaverum-UFFoz, with the following inclusion criteria:

- AVF or AVG with 6 weeks of maturation, with clinical indication for the beginning of cannulation;
- Cannulation sites marked with ultra-sound;

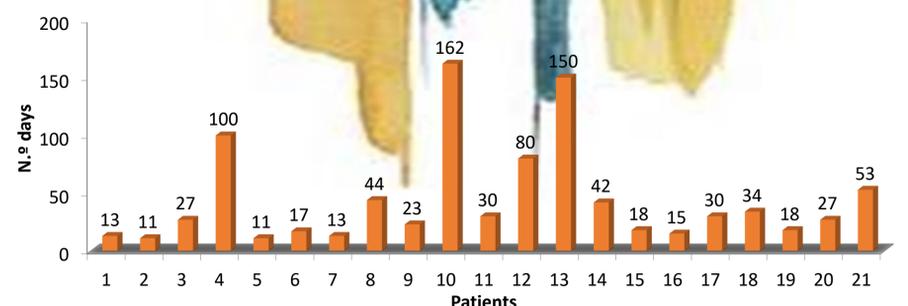
N=21

Period of time: 1st January to 31th of December 2018.

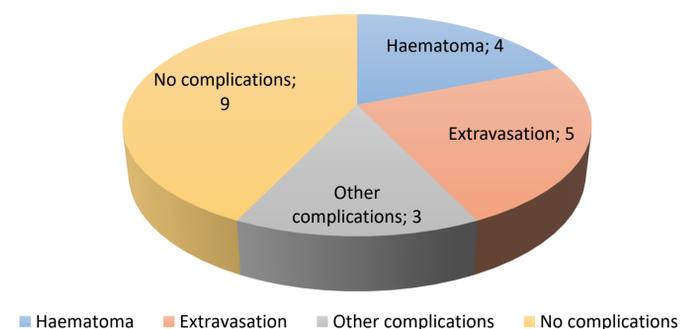
RESULTS

The data analysis has resulted the use of ultra-sound in 21 patients. In 20 of those patients the technique used was the marking of cannulation sites and the selection of puncture technique. In one patient the eco-guided cannulation technique was used. The sample of study comprises 15 male and 6 female patients with average of 67 years of age. 42,8% of our sample patients have diabetes with average time of haemodialysis of 17 months. From the beginning of cannulation until the central venous catheter (CVC) removal, the CVC permanence time an average of 27 days, with a minimum of 11 days and maximum of 162 days, having been the diabetic patients the ones who's CVC stayed in place for a longer period of time. From the incidents only 3 of them (1 haematoma, 1 extravasation and 1 difficult to obtain an adequate blood flow) occurred in the first cannulation

Time of permanence of CVC after first cannulation



Complications after 1st cannulation



CONCLUSION

The use of an ultra-sound on a daily basis can have a crucial impact, providing a precise cannulation.

The nurse is the one of the main team members handling the vascular access. Therefore, in order to become competent in this matter is urgent to acquire theoretical and practical skills that would allow an effective evaluation and manipulation of vascular access.

References

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