Importance of vascular access in haemodialysis patients

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Introduction

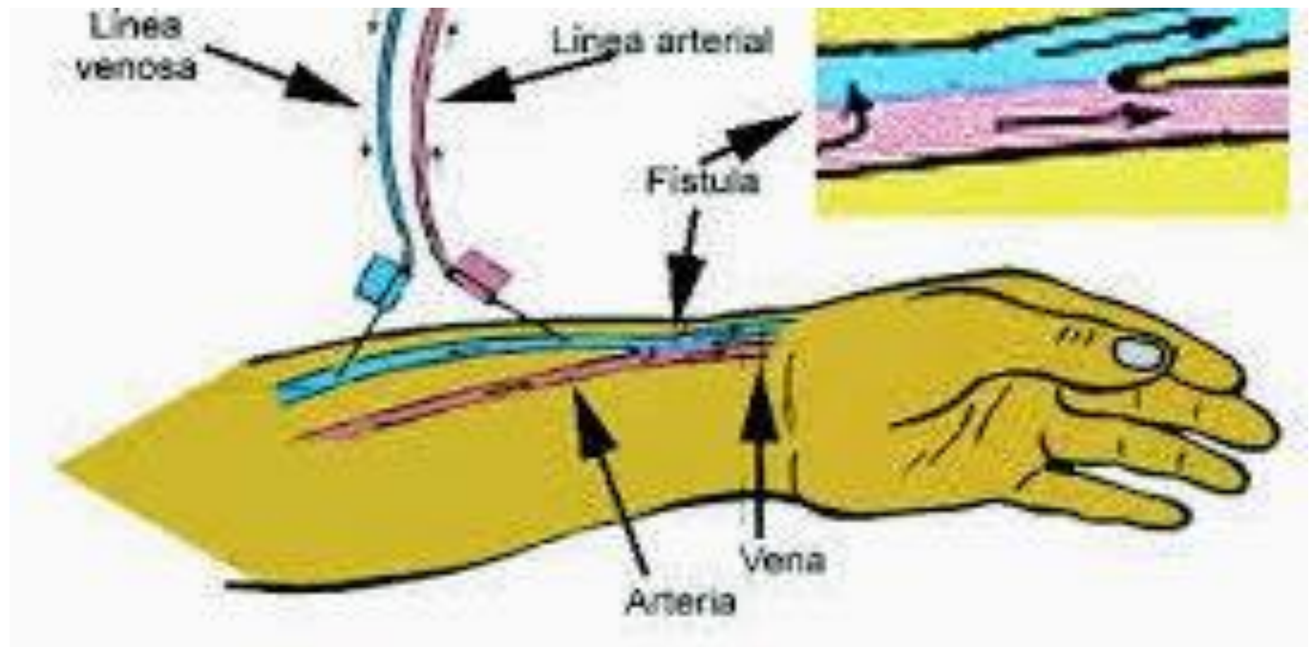
The quality of dialysis is directly linked to the quality of the vascular access. In 2014, our dialysis unit was enrolled in a study on vascular access. A special module for vascular access monitoring was created - the first module that reflects the work of the nurse. At present, all our dialysis units (35) of a network use this module.

Objectives

To identify, monitor and resolve all problems related to vascular access of dialysed patients and to determine the relationship between the puncture technique and vascular access complications.

Methods

General data of dialysed patients were collected between 2014 and 2017. Nurses documented the following points for each treatment: puncture technique, needle positioning, needle spacing, needle rotation, arterial puncture needle direction, signs of infection or occlusion, the number of punctures, the difficulty of puncturing, and the name of the nurse that punctured.



Picture 1: explain what it is

Picture 2: explain it

Results

All events and complications related to vascular access were registered in our database: difficult punctures, functional impairment of the vascular access (AVF and CVC), prescribed blood flow target not reached, Kt/V<1.4, haematoma, prolonged haemostasis. Moreover, we monitored the number of hospitalisation days for complications related to vascular access or death (infections, haematoma, and thrombosis).

According to the data recorded in the system, we achieved the following results:

- Positive, associated with a reduced number of complications:

- antegrade puncture in 88.41%
- bevel up orientation in 95%
- no rotation of the fistula needle in 84%

- Negative, associated with a high number of complications:

- the puncture technique in 81.88%
- 16 G fistula needles used in 75% of the patients
- actual blood flow <335 ml/min in 47% of the patients

Conclusion

Documentation of vascular access data of haemodialysis patients helped us in the early identification of vascular access problems and taking corrective measures to resolve them in a timely manner in order to improve the overall quality of dialysis treatment.