

The nurse's role in a multidisciplinary team for efficiency enhancement in dialysis

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Introduction

Kt/V remains widely used to measure dialysis adequacy and effectiveness, and can be calculated mathematically [single-pool Kt/V (spKt/V)], from the ratio of post to pre-dialytic blood urea nitrogen or by automatic intradialytic measurements which are equivalent to spKt/V measurements. Several procedures that can improve Kt/V and if applied regularly, can provide a steady and efficient treatment to patients, improving quality of life and survival ratio.

Objectives

- To identify the mechanisms available for nurses to increase dialysis efficacy;
- To determine the importance of the multidisciplinary team communication in dialysis efficacy.

Methods

Observational, retrospective and descriptive study was carried out.

Over a period of 4 years (from January-2014 to November-2017) a sample of 18 dialysis patients was observed. During the follow-up, automatic intradialytic Kt/V was regularly assessed by the multidisciplinary team and both blood flow (Q_b) and needle gauge optimised, within safety parameters such as: vascular access (VA) shunt's pressures; assessing VA internal access flow (Q_a).

Kt/V was calculated via the dialysis machine based on process of the equivalent diffusion coefficients of the sodium ion and the urea molecule.

Treatment data was automatically transferred from the machine to a central database.

Results

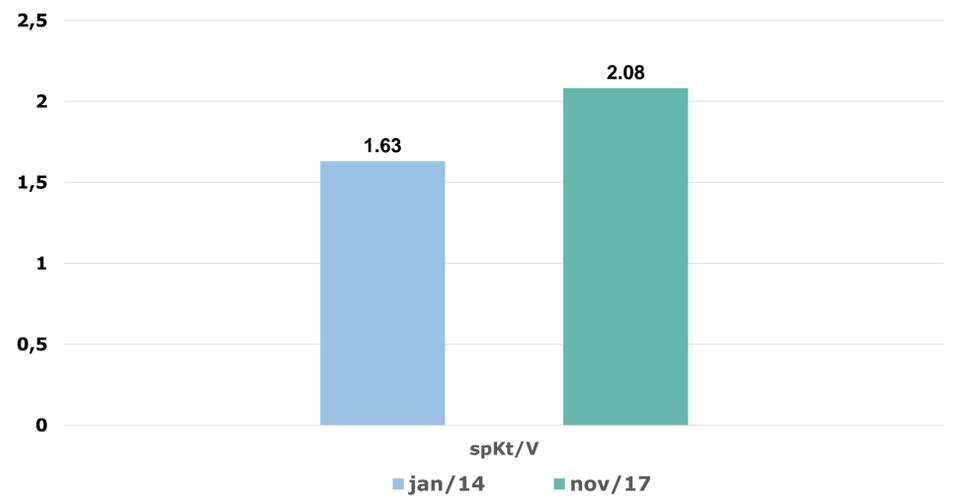
Mean age was 64.61 years and 10 (56%) patients were female. Mean treatment time was 248.61 minutes. 3 patients used central venous catheter as VA, the remaining internal VA. In January-2014, 72% of patients reached or exceeded the target of spKt/V 1.4 and at the end of the study period this target was achieved in all patients. Mean Kt/V increased from 1.63 to 2.08 and Q_b increased from 334.09 to 435.94 mL/min.

Conclusion

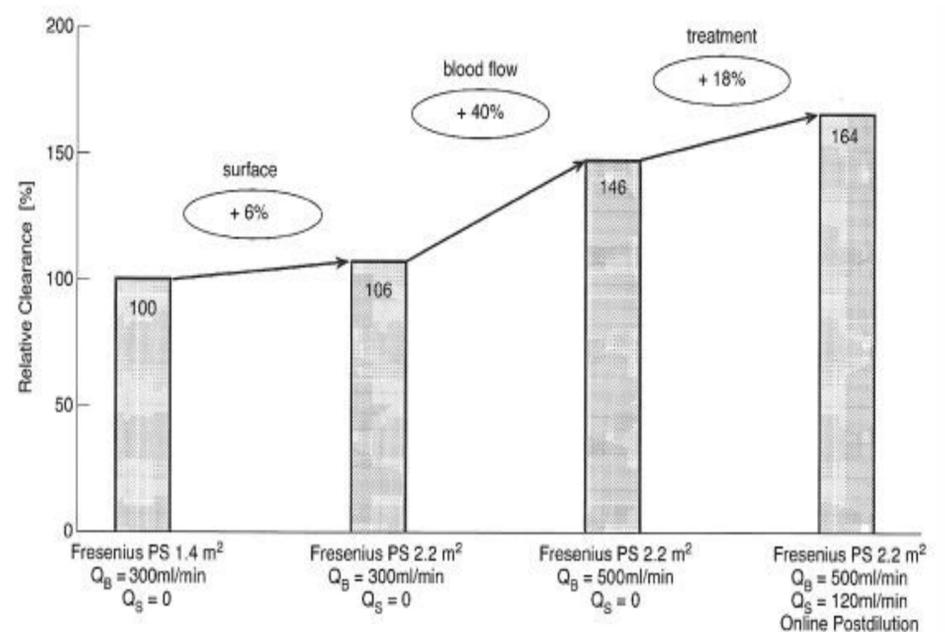
We concluded that the nurse plays a major role in the management of dialysis treatments, using several available tools to achieve the best possible Kt/V thus contributing to an effective treatment. Nurses communication inside the healthcare team plays a fundamental role in a dialysis unit contributing to the patient's well-being and identifying potential for improvement.

References

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Graph 1: Increase of Kt/V from Jan 2014 to Nov 2017



Picture 1: Contribution of surface, blood flow and treatment modality for urea clearances ⁽⁴⁾