

Improving clinical outcomes through patient education, use of dialysis technology and the monitoring quality of indicators

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Introduction

Several studies have proven a correlation between the dialysis dose administered and the mortality and morbidity among dialysis patients. In order to avoid the negative effects of inadequate dialysis, continuous monitoring is essential.

The nursing staff is fully aware of just how difficult it is to achieve targets, e.g. duration of dialysis or Kt/V, due to the low level of patient compliance (Fig.1).

The dialysis adequacy was monitored by the Kt/V, and is now defined as the largest index for prescription and quantification of the dialysis dose. It is calculated directly from the dialysis machine by means of the Online Clearance Monitor(OCM®).

The OCM is a module integrated in our dialysis machines which uses the equivalence between the diffusion coefficient of the sodium ion and the urea molecule in order to calculate the level of clearance during treatment.

Objectives

To improve dialysis adequacy and increase the treatment time for at least 90% of the new patients after the merging of two dialysis centres.

Methods

At time 0 (T0), two clinics "A" (50 patients) and "B" (20 patients) merged. Nurses were asked to monitor the duration of the dialysis session and the relative dialysis adequacy of patients in clinic B more strictly. After 6 months, nurses began with the project to improve the clinical target by means of patient education, regular meetings to check the level of target achievement, and to evaluate all relevant quality indicators for a period of one year (T1).

Results

Treatment Time was used for statistical analysis.

90% of clinic B patients achieved treatment time target with a statistically significant improvement ($p < 0.0001$) from 225.00 min (T0) to 239.45 min (T1)(Figure 1).

95% of clinic B patients achieved dialysis adequacy target with a statistically significant improvement ($p < 0.0001$) from Kt/V 1.03 (T0) to Kt/V 1.75 (T1) (Figure 2).

Conclusion

Providing adequate dialysis therapy to our patients is a precise and constant commitment, and the persistence of inadequate outcomes requires modifications to the care and assistance provided.

By means of the continuous improvement programme implemented through continuous patient education carried out by the nursing staff, we were able to achieve the targets and increased both treatment time and Kt/V.



Figure 1: Nurse in Patient Care

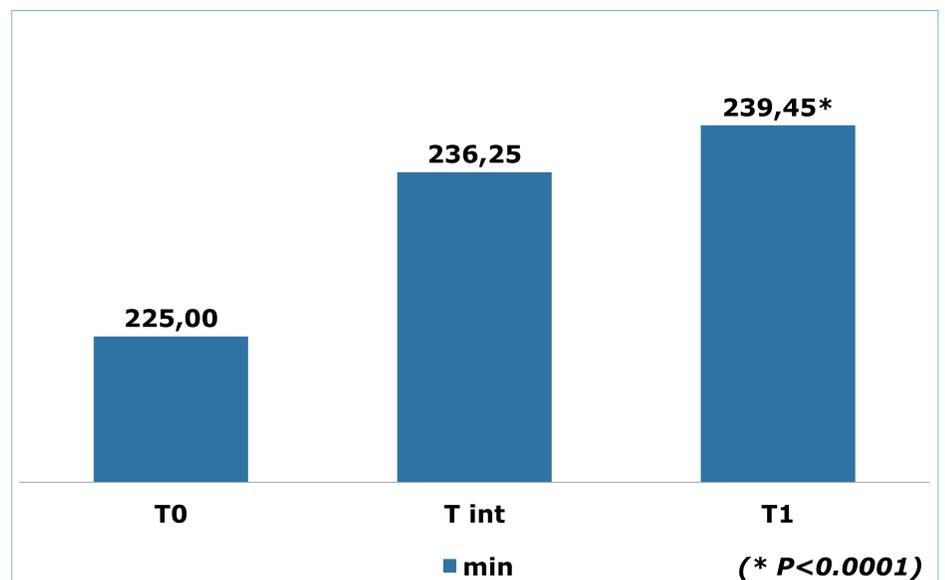


Figure 2: Treatment Time

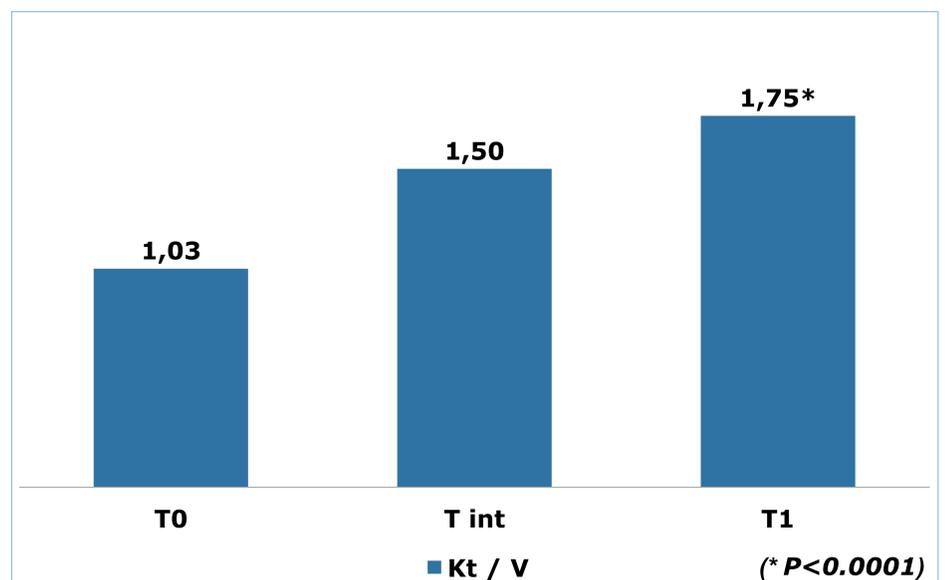


Figure 3: Dialysis Adequacy

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