

“Serum Albumin not only a Marker of Nutrition”

Multidisciplinary Interventions to improve Albumin in Peritoneal Dialysis Population - Qatar

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Background

Patients on peritoneal dialysis (PD) have relied on a variety of laboratory measures to assess the health of patients and their response to treatment. Serum Albumin (SA) is a good predictor of adverse clinical outcomes in PD patients. At Qatar, Fahad bin Jassam Kidney Center-HGH is the main provider for PD, we had 180 PD patients and over the period of q 3 & q 4 2016 serum albumin (>34) fall down from the q1 & q2 2016, 65% & 64% to 57% & 54% respectively. With this hypoalbuminemia incident we decided to run a prospective improvement trial to improve the Serum Albumin level. With the hypoalbuminemia patients lead to malnutrition, easy tiredness, prone to infections and admissions and to mortality.

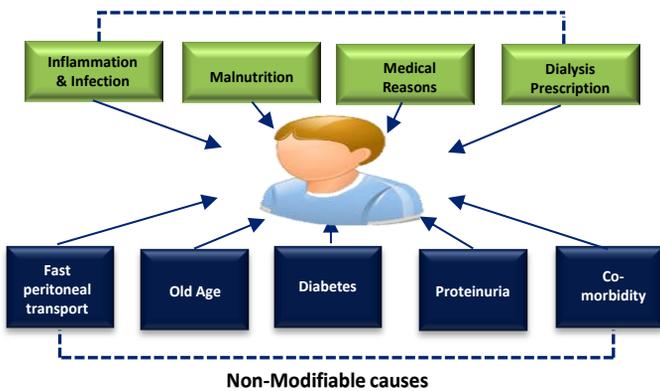
Aim

To improve the percentage of PD patients with Serum Albumin level >34 gm/L from 54% to 65% by the end of June 2018 .

Method

Interpreting the medical implications of declining serum albumin in PD patients can be a challenge. Multidisciplinary team was formulated that led by Nephrologist, and consist of PD Nurses, Dietician, Educator, Social worker and quality team to identify and to manage the hypoalbuminemia. We conducted a random survey to determine the food habits of patients, that taken almost routinely at home. We undertook root cause analysis for each case of hypoalbuminemia (SA<34) in the 6 months preceding the trial to identify any predisposing risk factors like inflammation, volume overload, effects of ARB medication, PD modality versus to the peritoneal membrane, loss of protein through urine etc. Inadequate dialysis may result in the retention of uremic toxins, which can, among other things, suppress appetite and result in malnutrition and morbidity. With the inadequate dialysis, patients lead to malnutrition, easy tiredness, prone to infections and admissions and to mortality.

Modifiable causes

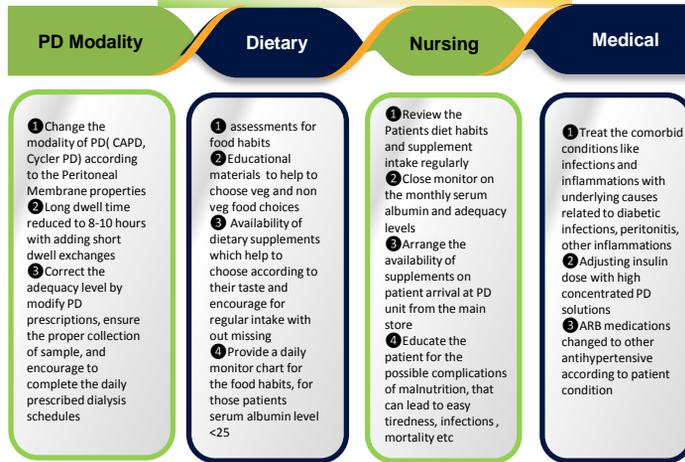


Based on the above data , the main contributing factors leads to hypoalbuminemia are from inadequate intake, inflammatory effects and loss of protein through dialysate.

For the non-modifiable causes , the mode of treatment only to control the effects of causes.

- For Cycler PD, keep day dry prescription to reduce protein loss to the dialysate
- Ensure adequate dialysis
- Feed during the drain time , helps to avoid the feeling fullness of abdomen
- Small and frequent diet improves the appetite
- Control the usage high concentrated dialysate
- 24 hour urine protein and 24 hour effluent protein loss measured
- Control the contributing factors like volume overload, different type of infections and inflammations

Strategy for Hypoalbuminemia Management



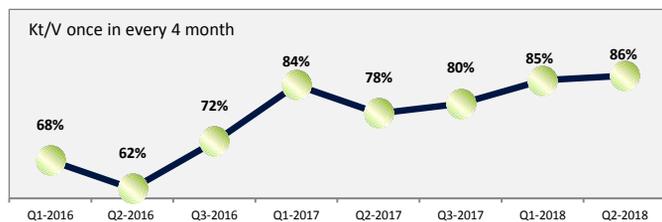
Result

Remarkable improvement in Peritoneal dialysis patients serum albumin level >34 gm/L from 54% to 68% by end of June-2018 . As the SA improves; there is a good impact on the adequacy, mortality, inflammation, control of DM, technique failure and total quality of life. Dialysis adequacy improves from 68% to 86%

Albumin > 34



Adequacy (Kt/V) >1.7



Conclusion

- As we improve the Serum Albumin, patient’s general health status and quality of life improved
- While correcting the PD prescriptions, adequacy had an impact, results in increase the appetite of patients
- In between education programs for the patients, helped to improve the compliance on the treatment therapy, and to the renal supplements
- Ongoing program sustains the quality of patient care

References

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