Chronic kidney disease (CKD) is a condition characterized by the gradual loss of kidney function over time, leading to build-up of toxic wastes inside the body. In the Philippines, recent data revealed that CKD affects one in 10 adults. In 2012, the National Kidney and Transplant Institute (NKTI) cited kidney failure as the ninth (9th) leading cause of death among Filipinos. Most CKD cases are detected at the end-stage renal disease (ESRD), where treatment like dialysis is needed. Patients undergoing dialysis treatment are encouraged to eat higher amounts of protein. High-biologic value (HBV) proteins must comprise at least 50% of the protein requirement of patients with CKD. These high-quality proteins provide complete source of essential amino acids and produce less waste than others. Sources of HBV proteins are lean meat, chicken, fish, egg, and soya. Rice is the staple food of the Filipinos and contains approximately 4 grams protein per 160 g (1 cup) and when taken 3 cups daily, will yield 12 grams of protein. This implies that protein requirement of dialysed patients mainly comes from rice which is of low biological value (LBV), a possible risk factor to developing protein-energy malnutrition (PEM) consequently resulting to poor quality of life (QOL).

This study aimed to evaluate the quality of life of hemodialysed patients with chronic kidney disease before and after consuming low-protein rice over a 3-week period within the 8 week study period. Specifically, it aimed to develop dietary guides and protein-controlled recipe booklets, both for non-dialysed and hemodialysed patients, as well as to determine the acceptability/likeliness of the low-protein rice and protein-controlled recipes.

**INTRODUCTION**

**MATERIALS AND METHODS**

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TOTAL NUMBER OF SCREENED CKD PATIENTS (n = 58)

- Non-dialysed (n = 3)
- Hemodialysed (n = 55)

COMPLETED THE INTERVENTION (n = 51)

DROP-OUT (n = 4)

RESULTS

- 37% Diabetes (DM)
- 2% Kidney Stones
- 2% Prolonged intake of pain killer
- 59% Hypertension (HBP)

All participants are under the care of the nephrologist while only 1 out 51 had consulted a dietician. Consistent with the global and local statistics, the two major causes of CKD are hypertension (58.8%) and diabetes (37.3%). All hypertensive and diabetic participants are on maintenance medication.

LABORATORY RESULTS

The mean serum creatinine level of the patients at baseline was significantly decreased which improved their eGFR, although not significantly.

<table>
<thead>
<tr>
<th>Serum creatinine (umoL/L)</th>
<th>Estimated GFR (mL/min/1.73m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1137.83 umol/L</td>
<td>4.17 mL/min/1.73m²</td>
</tr>
<tr>
<td>1071.06 umol/L</td>
<td>4.45 mL/min/1.73m²</td>
</tr>
</tbody>
</table>

Note: Normal level of serum creatinine:
- 80-115 μmol/L for males
- 53-97 μmol/L for females

Source: American Association for Clinical Chemistry, 2001-2017 (labtestsonline.org)

SOCIOECONOMIC AND DEMOGRAPHIC PROFILE

At baseline, there were 35 who have normal nutritional status, 7 underweight, and 9 overweight and obese based on the World Health Organization (WHO) BMI cut-off points. After Treatment B, the number of patients with normal BMI was increased by 3.
CONCLUSION AND RECOMMENDATIONS

The consumption of low-protein rice, developed protein-controlled recipes guided by the dietary guide and nutrition counseling improved the quality of life of patients on hemodialysis. Consumption of more high biological value proteins from animal sources which is still within the recommendation of at least 50% of the total protein requirement per day will be more attainable by consuming low-protein rice.

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