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Effect of Education and Nutritional Counseling On Maintenance Hemodialysis Patient's

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Objectives: Nutrition education and counseling are important for ESRD patients on maintenance hemodialysis (MHD). We studied impact of education and nutrition counseling on hemodialysis patient's knowledge, attitude, and dietary adherence.

Methods: The study used random pretest - posttest control group design and of 77 patients, 38 were man (50.6%) and 39 were woman (49.4%), the mean of age was 46.71 ± 9.40 years old. 41 patients were studied at baseline and after 4 weeks of education and nutrition counseling by dietician and 36 patients were controlled. Patients were counseled regarding intake of recommended protein and calories, and restriction of salt, fluids, potassium, fosfor, and some tips to solve dietary problem. We used leaflet and hand book contains all education material and food record. Patient's knowledge, attitude, and dietary compliance were assessed on 7th and 10th week to evaluate the impact of education and nutritional counseling.

Results: There were increased knowledge ($p = 0.0001$), increased attitudes ($p= 0.0001$) and better diet compliance profile ($p=0.0001$). The intervention was significantly effective on increasing intake of energy ($p=0.012$) and fat ($p=0,0001$) and higher difference in protein intake and carbohydrate intake but not significant ($p=0,102$ and $0,091$). Nutrition education and counseling was a process of directing MHD patients towards eating behaviors that fit the diet therapy to meet nutritional needs and to solve underlying problems for change, which were carried out consecutively and repeatedly. Improving energy intake on MHD was important to maintan nutritional status and to prevent Protein Energy Wasting (PEW). The effectiveness of haemodialysis could inhibited by dietary nonadherence mainly due to lack of protein and energy intake that caused PEW.

Conclusions: The education and nutrition counselling was found effective on improving knowledge, attitudes, diet compliance behavior profile, energy and fat dietary intake on haemodialysis patients.

Table Result 1-2

TABLE RESULT “Effect of Education and Nutritional Counseling On Maintenance Hemodialysis Patient’s”

Table-1: Characteristics of MHD patients.

Variable	Group A (n=41)		Group B (n=36)		Total		P value
	n	%	n	%	n	%	
Gender							
Female	21	51.2	17	47.2	38	49.4	0.730
Male	20	48.8	19	52.8	39	50.6	
Total	41	100	36	100	77	100	
Marital Status							
Married	35	85.4	31	86.1	66	85.7	0.927
Unmarried	6	14.6	5	13.9	11	14.3	
Total	41	100	36	100	77	100	
Education							
Elementary	5	12.2	3	8.3	8	10.4	0.996
High School	23	56.1	23	63.9	46	59.7	
College	13	31.7	10	27.8	23	29.9	
Total	41	100	36	100	77	100	
Employee Status							
Unemployee	22	53.7	21	58.3	43	55.8	0.652
Student	2	4.9	2	5.6	4	5.2	
Employee	17	41.5	13	36.1	30	40.0	
Total	41	100	36	100	77	100	
Family Support							
Yes	40	97.6	35	97.2	75	97.4	0.927
No	1	2.4	1	2.8	2	2.6	
Total	41	100	36	100	77	100	
Diabetes Comorbidity							
No	29	70.7	23	63.9	52	67.5	0.692
Yes	12	29.3	13	36.1	25	32.5	
Total	41	100	36	100	77	100	
Length of HD Period							
< 1 years	19	46.3	21	58.3	40	51.9	0.411
≥ 1 years	22	53.7	15	41.7	37	48.1	
Total	41	100	36	100	77	100	
Adequacy of HD (Kt/V)							
< 1.8	6	14.6	1	2.8	7	9.0	0.113
≥ 1.8	35	85.4	35	97.2	70	91.0	
Total	41	100	36	100	77	100	
BMI (Mean + SD)	23.39 + 3.32		22.79 + 4.04				0.481

Table-2: Knowledge Score of Treatment Group and Control Group

Group	Mean ± SD		Δ	p value	Mean ± SD		Δ	p value	p value
	Baseline	7 th week			10 th week	10 th week			
A (n=41)	64.92 ± 15.39	86.49 ± 13.29	21.57 ± 2.10	0.0001*	95.68 ± 7.89	30.76 ± 7.5	0.0001*	0.001*	
B (n=36)	69.23 ± 14.71	77.35 ± 10.23	8.12 ± 4.48	0.008	77.14 ± 11.40	7.91 ± 3.3	0.013		

* Mann-Whitney U Test

Table-3: Attitude Score of Treatment Group and Control Group

Group	Mean ± SD		Δ	p value	Mean ± SD		Δ	p value	p value
	Baseline	7 th week			10 th week	10 th week			
A (n=41)	76.55 ± 14.49	89.49 ± 9.22	12.94 ± 5.27	0.0001*	89.49 ± 9.22	12.94 ± 5.27	0.0001*	0.0001*	
B (n=36)	76.92 ± 12.47	81.62 ± 8.28	4.7 ± 4.19	0.164*	81.62 ± 8.28	4.7 ± 4.19	0.005*	*	

* Mann-Whitney U Test

Table Result 3

Table-3: Dietary Adherence of Treatment Group and Control Group

Group	Mean ± SD		Δ	p value	Mean ± SD		Δ	p value	p value
	Baseline	7 th week			10 th week	10 th week			
A (n=41)	6.14 ± 2.87	6.71 ± 2.69	0.57 ± 0.18	0.256*	6.78 ± 2.73	0.64 ± 0.14	0.197*	0.001*	
B (n=36)	6.19 ± 1.88	5.53 ± 2.73	-0.66 ± 0.85	0.057*	4.94 ± 1.85	-1.85 ± 0.02	0.006*		

* Mann-Whitney U Test