

THE IMPACT OF HEALTH FOOD AND IMMUNOSUPPRESSANT IN ORGAN TRANSPLANT PATIENTS

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BACKGROUND

Most organ transplant patients possibly undertake multiple chemo-therapy and/or radiotherapy frequently before transplantation. Some patients might have complementary and alternative medicines or dietary supplements to strengthen the immunologic function in previous treatments. After transplantation, patient needs to take immunosuppressant to reduce repulsion. Some studies have already verified Chinese herbal medicine influence the dosage of immunosuppressant.

METHODS

A cross-sectional studying used questionnaire to collect dietary supplements of 255 organ (liver, stem cell, and kidney) transplant patients and collected the dosage of immunosuppressant from medical records.

RESULTS

Eighty-two percent of organ transplant patients reported to be health food consumers before transplantation. Calcium tablets (35.3%), and vitamin B groups (23.5%) were the most common health foods in this study. Glutamine, treating the side effect of chemotherapy and/or radiotherapy, was the most of health foods in stem cell trans-plant patients (72.0%). Calcium tablets and vitamin B groups did not influence the dosage of immunosuppressant ($P = 0.8354$, and $P = 0.8377$), but glutamine was related with the dosage of immunosuppressant in stem cell transplant patients ($P = 0.0302$). The health care information of stem cell and kidney transplant patients was from “medical staff” (68% and 58.2%), of the liver transplant patient was from “family relatives and friends” (38.1%).

Table 1. Comparison the Use of Health Food between Before and After Organ Transplantation

	All patients		kidney transplant patients		Liver transplant patients		Stem cell transplant patients		P value
	(n=255)		(n=146)		(n=84)		(n=25)		
	n	%	n	%	n	%	n	%	
Before									<0.0001
Health food	211	82.7	133	91.1	56	66.7	22	88.0	
No health food	44	17.3	13	8.9	28	33.3	3	12.0	
After									0.0834
Health food	141	55.3	83	56.8	40	47.6	18	72.0	
No health food	114	44.7	63	43.2	44	52.4	7	28.0	

Table 2. The Top 5 Health Foods and Glutamine Used Before Organ Transplantation

	All patients		kidney transplant patients		Liver transplant patients		Stem cell transplant patients	
	(n=255)		(n=146)		(n=84)		(n=25)	
	n	%	n	%	n	%	n	%
Calcium tablets	90	35.3	85	58.2	4	4.8	1	4.0
Vitamin B groups	60	23.5	52	35.6	8	9.5	0	0.0
Oral nutrition supplements	36	14.1	22	15.1	3	3.6	11	44.0
Chinese medicine	32	12.6	20	13.7	12	14.3	0	0.0
Multivitamins	26	10.2	11	7.2	13	15.5	2	8.0
Glutamine	18	7.0	0	0.0	0	0.0	18	72.0

Table 3. The Impact of Health Foods on the Dosage of Immunosuppressant in Transplant Patients(N=255)

	Low dosage of immuno-suppressant		medium dosage of immuno-suppressant		High dosage of immuno-suppressant		P value
	(n=70)		(n=127)		(n=58)		
	N	%	n	%	n	%	
Calcium tablets							0.8354
No	47	67.1	82	64.6	36	62.1	
Yes	23	32.9	75	35.4	22	37.9	
Vitamin B groups							0.8877
No	55	78.6	96	75.6	44	75.9	
Yes	15	21.4	31	24.4	14	24.1	
Oral nutrition supplements							0.4676
No	63	90.0	108	85.1	48	82.8	
Yes	7	10.0	19	14.9	10	17.2	

Chi-square test. $p < 0.05$

Table 4. The Impact of Health Foods on the Dosage of Immunosuppressant in Stem cell Transplant Patients(N=25)

	Low dosage of immuno-suppressant		medium dosage of immuno-suppressant		High dosage of immuno-suppressant		P value
	(n=0)		(n=12)		(n=13)		
	N	%	n	%	n	%	
Health foods							0.0957
No	0	0.0	3	25.0	0	0.0	
Yes	0	0.0	9	75.0	13	100.0	
Types/ health foods							0.2532
0	0	0.0	3	25.0	0	0.0	
1	0	0.0	2	16.7	2	15.4	
2	0	0.0	4	33.3	5	38.5	
3+	0	0.0	3	25.0	6	46.2	
Glutamine		0.0					0.0302
No	0	0.0	6	50.0	1	7.7	
Yes	0	0.0	6	50.0	12	92.3	

Chi-square test. $p < 0.05$

Table 5. Primary Sources of Health Care Information

	kidney transplant patients(n=146)		Liver transplant patients(n=84)		Stem cell transplant patients(n=25)	
	n	%	n	%	n	%
Medical staff	85	58.2	21	25.0	17	68.0
Media advertising	62	42.5	25	29.8	6	4.0
Newspaper/Magazine	60	41.1	26	30.9	6	24.0
Internet website	30	20.6	18	21.4	2	24.0
Friends/relatives	29	19.9	32	38.1	13	52.0
Supporting group	21	14.4	4	4.8	1	4.0
Other patients	19	13.0	3	3.6	8	32.0
Store clerk	8	5.5	1	1.2	0	8.0
Others	4	2.7	11	13.1	0	0.0

CONCLUSIONS

To ensure the organ transplant patient to choose the correct health foods, the medical staff should teach patient with the information of health foods.

KEYWORDS

Organ transplant, Health foods, Immunosuppressant