Nutrition Assessment of 6-year Followed-up Kidney Transplant Recipients in Taiwan

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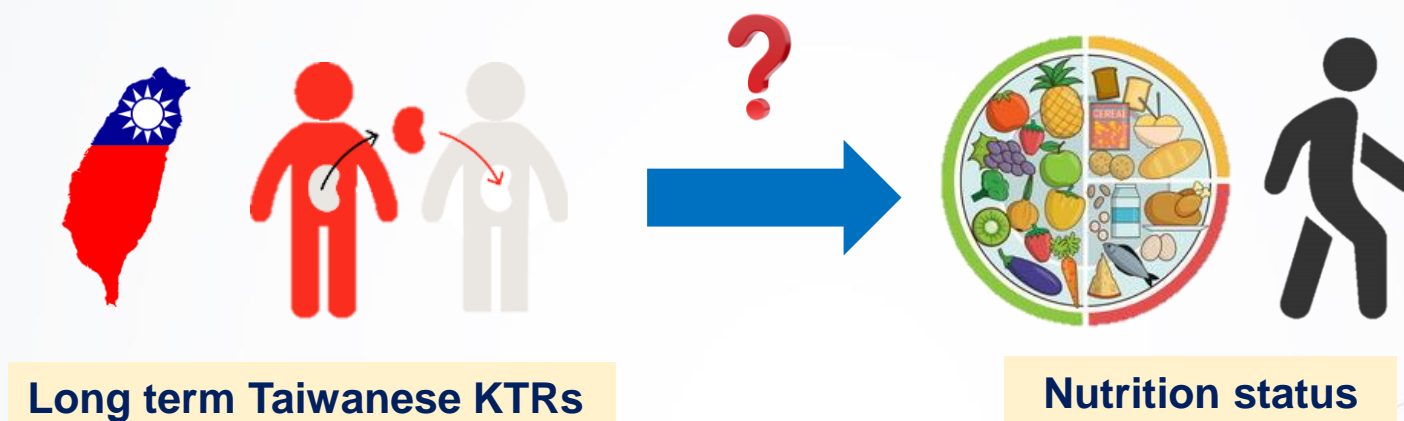
Introduction & Objective

Introduction

- Renal transplant is a gold treatment of end stage renal disease.
- Graft kidney outcomes were associated with nutritional status in long term kidney transplant recipients (KTRs).
- Less nutrition related study for long term KTRs have been investigated.

Objective

Long term Taiwanese KTRs

Nutrition status
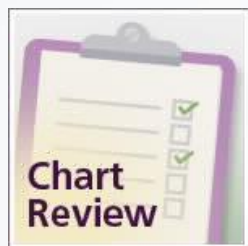
Method

✓ Inclusion criteria

- \> 18 years old
- Functioning allograft for at least one year after transplantation
- Without systemic illnesses
- None changes in body weight of more than 3 kg
- Glomerular filtration rate variation less than 25%

✗ Exclusion criteria

- Missing laboratory data, acute illness (i.e. acute rejection)

Anthropometric & Laboratory Chart Review

Dietary intake Dietitian

3-daydietary records
- 2 weekdays
- 1 weekend

Statistics analysis SAS 9.4 version

Result

Table 1. Comparison of nutritional assessment between the baseline and long-term followed-up in patients with kidney transplant recipients.

Follow-up - baseline	Mean	SD	SDEM	95% CL Lower	95% CL Upper	DF	t	P	Follow-up - baseline	Mean	SD	SDEM	95% CL Lower	95% CL Upper	DF	t	P
Anthropometry									**Dietary nutrients**								
BH, cm	-0.9	2.5	0.4	-1.7	-0.1	39	-2.3	**0.02**	Calorie, kcal	-108.0	485.3	76.7	-263.2	47.2	39	-1.4	0.17
BW, kg	0.2	5.2	0.8	-1.5	1.8	39	0.2	0.83	Protein, g	1.5	19.0	3.0	-4.6	7.5	39	0.5	0.63
BF, %	-0.9	8.7	1.4	-3.7	1.9	39	-0.6	0.53	CHO, g	-20.4	63.7	10.1	-40.7	0.0	39	-2.0	**0.04**
Muscle mass, kg	-2.0	5.0	0.8	-3.6	-0.4	39	-2.5	**0.02**	Fat, g	-3.2	26.0	4.1	-11.6	5.1	39	-0.8	0.44
PAL, equivalent	-0.4	0.5	0.1	-0.6	-0.3	39	-6.0	**<.0001**	Fiber, g	-0.7	7.1	1.1	-3.0	1.6	39	-0.6	0.53
Laboratory									**Dietary food**								
Albumin, mg/dL	-0.2	0.3	0.0	-0.3	-0.1	39	-4.4	**<.0001**	Fruit, S	-0.4	1.2	0.2	-0.8	0.0	39	-2.2	**0.04**
Creatinine, mg/dL	0.2	0.5	0.1	0.0	0.3	39	2.3	**0.03**	Vegetable, S	0.1	1.3	0.2	-0.4	0.5	39	0.3	0.80
GFR, ml/min/1.73m^2	-5.6	12.8	2.0	-9.7	-1.5	39	-2.8	**<.01**	Cereal, S	-0.7	4.0	0.6	-2.0	0.6	39	-1.1	0.27
TC, mg/dL	-26.5	47.5	7.5	-41.7	-11.3	39	-3.5	**<.01**	Meat, S	0.5	2.4	0.4	-0.3	1.2	39	1.3	0.22
HDL-C, mg/dL	-1.8	11.9	1.9	-5.6	2.1	39	-0.9	0.36	Milk, S	0.2	0.5	0.1	0.0	0.3	39	2.0	0.05
LDL-C, mg/dL	-22.5	41.2	6.5	-35.7	-9.3	39	-3.5	**<.01**	Nuts & oil, S	0.3	4.4	0.7	-1.1	1.7	39	0.4	0.67
TG, mg/dL	-8.1	97.1	15.4	-39.1	23.0	39	-0.5	0.60									

Statistical analyzed by using paired t-test.

SD: standard deviation; SDEM: standard deviation error mean; CL: confidence level; BH: body height; BW: body weight; BF: body fat; PAL: physical activity level; GFR: glomerular filtration rate; TC: total cholesterol; HDL-C: high-density lipoprotein cholesterol; LDL-C: low-density lipoprotein cholesterol; TG: triglycerides; S: serving; CHO: carbohydrate;.

Followed-up KTRs
- ↓ **Muscle mass, physical activity, GFR, TC, creatinine**
- ↑ **LDL-C**
- ↓ **Dietary intake of carbohydrate and fruit**

Conclusion

Long term Taiwanese KTRs

Nutrition status

↓ Carbohydrate and fruit intake

↓ Muscle mass, physical activity

↓ Kidney function (GFR)

↑ LDL-C