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Dietary Analysis in Kidney Transplant Recipients who Developing New Onset Diabetes After Transplantation

Dongyeol Lee*[1], Hee-Ryong Lee[1], Jin Ho Lee[1], Joon-Seok Oh[1], Seung-Min Kim[1], Yong-Hun Shin[1], Joong Kyung Kim[1]

[1]Nephrology, Bongseng Hospital, BUSAN, Korea, Republic Of

Background: Survival rate has been improved with the development of immunosuppressive agents in kidney transplant recipients. But non-immunologic factors have significant impacts on morbidity and mortality after transplantation. Although dialysis nutritional problems are well described, nutritional problems after transplantation have received little attention. Nutritional interventions play an important role in preventing and managing common health problems associated with kidney transplantation such as obesity, hypertension, diabetes, and cardiovascular disease. Therefore, we retrospectively evaluated that diet may affect onset of diabetes after transplantation.

Methods: Fifty-eight kidney transplant recipients replied to the questionnaire who received post-transplant management at our hospital. The questionnaire included the 102 different questions about the amount and sorts of foods that they eat last week. Nutritional elements of diet in renal transplant patients who eat Korean food were analyzed on the basis of the survey. We analyzed the diet between new onset diabetes after transplantation group and control group.

Results: After kidney transplantation, 23 patients were occurred new onset diabetes in 58 patients. Mean age was 55.12 ± 17.77 years, weight before transplantation was 59.04 ± 11.08 kg, body mass index (BMI) before transplantation was 20.98 ± 2.84, weight gain after transplantation was 20.98 ± 0.59 kg. The mean intake of carbohydrate, lipid, and protein was 386.16 ± 193.42 g/day, 44.24 ± 21.13 g/day, 79.54 ± 33.47 g/day. The mean intake of water, iodine, selenium and cholesterol was 99.87 ± 41.56 g/day, 206.05 ± 320.29 ug/day, 99.87 ± 41.56 ug/day and 292.79 ± 157.28 mg/day. In patients with new onset diabetes, mean age was 57.05 ± 26.31 years, weight before transplantation was 64.51 ± 13.80 kg, BMI before transplantation was 23.10 ± 3.08, weight gain was 23.10 ± 13.80 kg. The mean intake of carbohydrate, lipid, and protein was 337.31 ± 178.40 g/day, 44.59 ± 28.19 g/day, 77.10 ± 45.11 g/day. The mean intake of water, iodine, selenium and cholesterol was 92.97 ± 50.57 g/day, 290.05 ± 320.29 ug/day, 92.97 ± 50.57 ug/day and 306.70 ± 214.03 mg/day.

Conclusion: More weight gain after transplantation, intake of iodine, cholesterol and less intake of selenium in transplanted patients are showed high prevalence of new-onset diabetes.

Keywords: transplantation