Influence of obesity on post renal transplanted patients
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Introduction: Obesity has long been regarded as risk factor in general surgical procedures; investigations have been carried out evaluating the risks associated with obesity in renal transplantation. The aim of this work was to study the following: The incidence of obesity (BMI>30) among Egyptian transplant patients, body weight variation within the first year of transplantation and impact of obesity on the following: (Immunosuppressants (cyclosporine A level and steroids), surgical and post-operative complications, short term graft outcome and biochemical changes like blood sugar, leptin and lipid profile).

Patients and Methods: This study included 100 live donor kidney transplant recipients. Patients were subdivided according to their calculated BMI where, 42 (42 per cent) were non-obese (Group I) (BMI=18.5-24.9 Kg/m²), 19 (19 per cent) were over-weight (Group II) (BMI=25-29.9 Kg/m²) and 39 (39 per cent) were obese (Group III) (BMI>30 Kg/m²) prior to transplantation. All patients were subjected to full medical history and clinical examination, BMI, triceps fold measurement, ECG and echocardiography, post-transplantation variables were collected at three, six and 12 months which included weight, blood cyclosporine, total serum cholesterol, triglycerides, HDL and LDL blood glucose, blood urea, serum creatinine, sodium, potassium, calcium, phosphorus, total and direct bilirubin, AST, ALT, alkaline phosphatase, and leptin level. Renal graft biopsy whenever indicated.

Results: In the current study, operative and post-operative surgical complications occurred more frequently among obese recipients, yet there was no statistically significant difference in the incidence of operative and post-operative surgical complications, operative duration or hospitalization between the three groups. A highly significant difference was regarding the amount of weight gain between the obese group and each of the overweight and non-obese groups. The obese group required higher doses of CsA per kilogram of body weight, than the overweight and non-obese groups until the 3rd month but after the 3rd month, the obese group required the lowest CsA doses per kilogram of body weight among the three groups in order to maintain the desired trough cyclosporine levels. Significant differences were noticed in systolic blood pressure levels by ANOVA test between the three groups at the 6th and 12th months after renal transplantation; the difference mainly detected between the non-obese and obese groups. There was a tendency toward rise in blood lipids in the three groups after surgery with a higher incidence among the obese and overweight groups. Leptin levels were also found to reach higher levels among the obese group. Co relational analyses one year post-transplant showed highly significant positive associations between leptin levels and BMI in our study population. We have noticed, higher fasting blood glucose levels in the obese when compared to the overweight and non-obese groups, even though the difference was not significant and a significant difference between the groups as regard to the total number of patients requiring anti-diabetic therapy 1 year post-transplant which was equal to 24 (61%), 6 (31%) and 12 (29%) in the obese, over-weight and non-obese groups, respectively. There was however no statistically significant difference between the 3 groups as regards the incidence of graft rejection; Graft survival or patient survival.

Conclusion: The commonest surgical adverse effect of having a BMI greater than 30 kg/m² was an increase in the incidence of wound infection and dehiscence. The commonest medical adverse effects of having a BMI greater than 30 kg/m² prior to renal transplantation were in the form of higher incidences of weight gain, systolic hypertension, hyperlipidemia and post transplant DM. Obese renal transplant recipients usually receive similar doses of immunotherapeutic drugs as non-obese recipients, where no special dose adjustment is necessary as regard MMF and azathioprine, yet obese patients require higher initial doses of CsA, and also require higher doses of steroids. Acute rejection episodes seem to occur at a higher incidence among the obese, yet the difference is not significant. A substantial proportion of transplant patients experience a marked increase in body weight following transplantation and obesity remains a significant cause of diabetes and cardiac complications. No significant difference is noticed in graft or patient survival with variation of BMI.

Biography
Magdy Elsharkawy completed his M.D. in 1988 and Ph.D. in 1998, and postdoctoral studies from Ain-Shams School of Medicine. He was the director of Nephrology unit from 2002 to 2010, Ain-Shams University Hospitals, and now the director of Dialysis unit, Nasser Institute (200 patients). He has published more than 35 papers in reputed journals (national and international), and presented several studies in international conferences, and serving as reviewer in several international journals. He is a working member in the ISN, ASN, ERA-EDTA, and board member of ESNT.

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