

Transplant Lists May Favor Nonobese Patients

Patients in the highest BMI range were 40% less likely to receive a transplant than those in the lowest range.

BY JEFF EVANS
Senior Writer

BOSTON — Obese patients remain much longer on waiting lists for kidneys and livers from deceased donors and have higher mortality than do nonobese individuals, Dr. Dorry L. Segev reported at the 2006 World Transplant Congress.

The increasing rate of obesity in the general population is mirrored by high rates of obese patients on waiting lists for kidney and liver transplants, said Dr. Segev of the department of surgery at Johns Hopkins University, Baltimore.

About 8% of patients on the United Network for Organ Sharing (UNOS) waiting list for a deceased donor liver and 7% of those waiting for a kidney have a body mass index (kg/m²) of 35-40. Another 4% of patients waiting for a liver and 2% of those waiting for a kidney have a BMI greater than 40, Dr. Segev said.

In his study of 166,063 patients on the UNOS waiting list for a primary deceased-donor kidney transplant during 1995-2005,

patients in BMI categories ranging from normal to morbidly obese benefited equally from transplantation, compared with patients in each BMI category who remained on the waiting list. These results suggested there might be a bias against renal transplantation in obese patients, he said.

The percentage of patients who received a deceased-donor kidney transplant during the study period declined significantly in a stepwise manner from a high of 44% in patients with the lowest BMI (18.5-25) to a low of 31% in those with the highest BMI (40 or greater). Those in the highest BMI category were 40% less likely to receive a kidney transplant than were patients in the lowest BMI range.

The mean waiting time to receipt of transplant similarly rose, from a low of 41 months in the lowest BMI group to a high of 65 months in the highest BMI group.

As BMI increased, patients had significantly higher rates of delayed graft function. But kidney transplant recipients with a BMI of 40 or greater had only modestly lower rates of graft survival at 5 years

(75%) and patient survival at 5 years (78%) than did normal BMI patients (80% and 83%, respectively).

The obese patients who were called in for a kidney transplant may have been a selected group that had better outcomes than an unselected group would have had. But if the obese patients who "were not called in were not appropriate for transplantation, perhaps we should never have listed them in the first place," Dr. Segev said at the congress, which was sponsored by the American Society of Transplant Surgeons, the American Society of Transplantation, and the Transplantation Society.

In the time since the Model for End-Stage Liver Disease (MELD) score was introduced in 2002 to allocate deceased donor livers to patients on the UNOS waiting list, obese patients with a MELD score less than 20 have been less likely than nonobese patients to be listed, to be transplanted once listed, or to receive a transplant in exception to their MELD score, Dr. Segev reported in a separate presentation.

In a review of the 30,968 patients placed on the UNOS waiting list for a deceased-donor liver since 2002, Dr. Segev and his associates found that as BMI increased, patients were less likely to be listed and transplanted at centers. Of patients with a BMI of 18.5-34.9, 100% were listed and 100% were transplanted. But among those with a BMI of 35-39.9, 83% were listed and 78% were transplanted. In patients with a BMI of 40 or greater, 74% were listed and 53% were transplanted. This trend nearly disappeared, however, when the analysis was limited to high-volume centers.

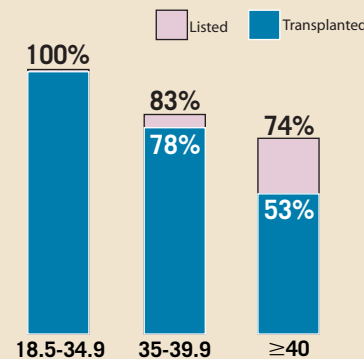
A BMI of 40 or greater was an independent risk factor for a longer wait for a

liver transplant, but not for graft loss or for patient death after transplantation.

In patients with a MELD score of less than 15, those with a BMI of 40 or greater spent significantly more time on the waiting list than did those with a BMI of 35-39.9. The same trend was true for recipients with a MELD score of 15-20, though all of the BMI subgroups with this severity of liver disease got transplanted faster than those with a MELD score of less than 15. Among all the BMI categories, there was no difference in the time to transplantation in patients with a MELD score greater than 20.

A significantly smaller percentage of patients in the highest BMI category received an exception to their MELD score than did patients in the lowest BMI category. This left those with a BMI of 40 or greater 35% less likely to receive an exception to their MELD score. ■

Thinner Patients More Likely to Be Listed for Kidney Transplants



Note: Based on a study of 30,968 patients.
Source: Dr. Segev

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Obese Living Kidney Donors May Face Risk of Hypertension

BY JEFF EVANS
Senior Writer

BOSTON — Obese living kidney donors may have an increased risk of hypertension, but not renal insufficiency or proteinuria, many years after donation, Dr. Mehdi Tavakol said at the 2006 World Transplant Congress.

In some reports, a high body mass index has been strongly associated with an increased risk of developing end-stage renal disease, whereas other studies have found that obese patients who underwent a unilateral nephrectomy for reasons other than donation had a higher risk of proteinuria and renal disease, said Dr. Tavakol of the division of transplant surgery at the University of California, San Francisco.

Dr. Tavakol and his associates located individuals who had donated a kidney at the university during 1969-2002 to determine if obesity at the time of the donation (BMI higher than 30 kg/m²) had a detrimental effect on donors' long-term renal function. Of 96 living kidney donors identified, 64 were female and about two-thirds were white; their mean age was 43

years. The patients who were obese at the time of donation were more obese after a mean of about 10 years of follow-up (a minimum of 3 years).

When the patients were broken into subgroups based on quartiles of BMI (less than 25, 25-29.9, 30-34.9, and 35 or higher), the investigators found no significant differences in the incidence of renal insufficiency (glomerular filtration rate less than 60 mL/min), proteinuria (greater than 150 mg/day), or microalbuminuria (greater than 30 mg/day). All of the BMI subgroups had a 70%-75% lower glomerular filtration rate at the time of follow-up than at the time of their predonation measurement.

But almost 50% of obese donors had hypertension at follow-up, compared with 30% of nonobese donors. The incidence of hypertension also rose significantly with increasing obesity. Univariate and multivariate analyses confirmed that obesity was a significant risk factor for developing hypertension.

These results "should be taken into consideration in the preoperative evaluation, counseling, and postoperative follow-up of these patients," he said. ■