BETTER LONG-TERM SURVIVAL OF KIDNEY TRANSPLANT RECIPIENTS WITH SLE: A UNOS ANALYSIS

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Background

Renal transplantation is considered the best treatment option for patients with ESRD caused by SLE. Many studies have shown a positive outcome for these patients. In our study we looked retrospectively at the outcome of transplanted SLE patients in UNOS data.

Study aim

The aim of this study was to evaluate kidney transplantation outcome in patients with Systemic Lupus Erythematosus (SLE).

Material and Methods

• Data was collected from the United Network for Organ Sharing database from January 1995 to May 2005. The study population was composed of 4281 kidney transplant recipients with systemic lupus erythematosus (SLE).
• The control group consisted of 20,068 randomly selected cases out of 131,819 kidney transplants performed during the study period. Pearson’s chi-square test was used to compare proportions between groups and Student’s t-test was used to compare differences in means between groups.
• Multivariate Cox regression analysis was performed to determine risk factors for patient survival.
• Kaplan-Meier survival analysis was used to analyze patient and graft survival.

Results

1- The overall incidence of kidney transplantation performed for SLE was 3.4%.
2- Compared to the control group, patients with SLE were younger, female and composed of more African-American, Hispanic and Asian patients.
3- Patients with SLE had lower body mass index, higher peak panel reactive antibodies, lower total mismatch, longer time on dialysis and significantly less diabetes and delayed graft function (DGF).
4- A greater proportion of living donor donation was associated with SLE patients, along with younger donor age.
5- There was no graft survival difference between patients with SLE and the control group after nine years. There was, however, a statistically improved patient survival in patients with SLE after nine years.

<table>
<thead>
<tr>
<th></th>
<th>Control N=20068</th>
<th>SLE N=4281</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>12178 (60.7%)</td>
<td>774 (18.1%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Age</td>
<td>45.0±15.2</td>
<td>37.6±11.6</td>
<td>&lt;0.0001</td>
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<tr>
<td>DM</td>
<td>5120(25.5%)</td>
<td>119(2.8%)</td>
<td>&lt;0.0001</td>
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<tr>
<td>BMI</td>
<td>26.2±5.6</td>
<td>24.3±5.4</td>
<td>&lt;0.0001</td>
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<tr>
<td>PRA</td>
<td>7.7±20.4</td>
<td>14.9±28.2</td>
<td>&lt;0.0001</td>
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<tr>
<td>D-Age</td>
<td>37.5±15.1</td>
<td>35.9±15.1</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>L-Donor</td>
<td>7812 (38.9%)</td>
<td>1816 (42.4%)</td>
<td>&lt;0.0001</td>
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<tr>
<td>DGF</td>
<td>3324(16.8%)</td>
<td>567(13.4%)</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Conclusions

• Recent studies have shown equivalent graft and patient survival in patients with SLE undergoing kidney transplantation.
• This study was based upon a large number of patients with SLE and shows improved patient survival in SLE patients nine years following transplantation. This may be partly secondary to the younger age of the recipients and donors and the significantly decreased number of patients with SLE and diabetes.
• The link between SLE and diabetes deserves further investigation; perhaps there is an immunologic explanation for the significantly lower incidence of developing diabetes in patients with SLE.

References