IMPACT OF HEMODIALYSIS AND SUBSEQUENT SIMULTANEOUS KIDNEY-PANCREAS TRANSPLANT ON CAROTID INTIMA-MEDIA THICKNESS IN TYPE 1 DIABETES MELLITUS PATIENTS

ACC Moderated Poster Contributions
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Background: In type 1 diabetes mellitus (T1DM) patients, kidney and simultaneous kidney-pancreas transplant (SKPT) result in longer and better quality of life. We examined how hemodialysis (HD) and subsequent SKPT in T1DM patients influence Carotid Intima-Media Thickness (CIMT).

Methods: Thirty T1DM individuals were recruited for three-time point CIMT assessment: baseline (on transplant waiting list), 18 months (mo) later and 18 mo after SKPT. Only patients with normal kidney and pancreas graft function were included. CIMT was measured by a single reader, blinded to time-point ultrasound, using standard technique. ANOVA with Bonferroni correction was used for comparisons. Appropriate multivariate analysis was performed.

Results: Age was 35±7 yo, 21 patients were male. Duration of T1DM was 22±8 years and HD was 40±29 mo. CIMT (Mean±Standard Error, in mm) of the right (RCCA) and left (LCCA) common carotid arteries, and the average of both are depicted in the table. Risk factors such as hemoglobin, A1C-hemoglobin, troponin, hs-CRP and left ventricle mass index had statistically significant changes. Variables independently correlated with CIMT reduction following SKPT: age, BMI and LDL-cholesterol.

Conclusions: Marked increase of CIMT occurred during HD and it was fully reverted after SKPT. Whether or not CIMT reduction in these patients indicates reduction of cardiovascular risk or even regression of atherosclerosis warrants larger cohort studies.

Carotid Intima-Media Thickness (mm)

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>18 mo</th>
<th>post SKPT</th>
<th>p</th>
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<tbody>
<tr>
<td>RCCA</td>
<td>0.54±0.45</td>
<td>0.73±0.60</td>
<td>0.60±0.42</td>
<td>0.002*/0.1#</td>
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<tr>
<td>LCCA</td>
<td>0.64±0.79</td>
<td>0.96±0.11</td>
<td>0.71±0.07</td>
<td>0.002*/0.3#</td>
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<tr>
<td>Mean CCA</td>
<td>0.59±0.56</td>
<td>0.84±0.83</td>
<td>0.65±0.51</td>
<td>0.001*/0.1#</td>
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