Methods: All patients with severe symptomatic aortic stenosis, CKD (est CrCl< 30ml/min) and BMI< 40kg/m2 undergoing pre-TAVR CTA assessment from 2013-4 at Columbia University Medical Center using the novel protocol were included. Using a 320-slice volumetric scanner (Aquilion One, Toshiba America Medical Systems), the protocol included ECG-gated volume scanning of the aortic root followed by ultrahelical vascular scanning from the aortic arch through femoral arteries, both using the same 320 detector rows in acquisition. 2 experienced, blinded cardiologists performed annular and aortic anatomic measurements; agreement was determined using intra-class correlation coefficient. 2 experienced, blinded radiologists graded image quality for assessing iliofemoral vascular access on a 4-point scale (1 non-diagnostic; 2 diagnostic but limited; 3 good; 4 excellent); agreement was determined using weighted kappa.

Results: 19 patients (mean age 83, BMI 24 kg/m2; 53% women) were studied. There was excellent intra and interobserver agreement for cardiac anatomic measurements (Table). The average vascular access score was 2.6; both radiologists found diagnostic quality vascular imaging in 100% of cases with outstanding inter-radiologist agreement (k=0.91).

Conclusions: This study is the largest of its kind to report the feasibility and reproducibility of measurements, for a very low contrast dose protocol for comprehensive pre-TAVR CTA. There was excellent agreement of cardiac measurements and all studies were assessed as diagnostic quality for vascular access assessment.

Table 1. Comparison of Observer Agreement of Measurements Using a Very Low Contrast Dose Cardiac CTA Protocol

<table>
<thead>
<tr>
<th>CT Anulus Area</th>
<th>CT Anulus Perimeter</th>
<th>CT Anulus Maximum Diameter</th>
<th>CT Anulus Minimum Diameter</th>
<th>CT LM Height</th>
<th>CT RCA Height</th>
<th>Vascular Access Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intraobserver Agreement</td>
<td>0.998</td>
<td>0.994</td>
<td>0.92</td>
<td>0.92</td>
<td>0.97</td>
<td>0.98</td>
</tr>
<tr>
<td>Interoobserver Agreement</td>
<td>0.995</td>
<td>0.995</td>
<td>0.96</td>
<td>0.96</td>
<td>0.82</td>
<td>0.88</td>
</tr>
</tbody>
</table>

TCT-256

Effectiveness Of Preprocedural Statin Administration In Reducing Contrast–Induced Acute Kidney Injury: A Meta-Analysis Of Randomized Controlled Trials

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Background: Preprocedural statin administration might reduce contrast–induced acute kidney injury (CT-AKI) incidence but current evidence is controversial. Methods: Randomized controlled trials (RCTs) comparing preprocedural statin administration before coronary catheterization with standard strategy (hydration alone or plus N–acetylcysteine) were searched in MEDLINE/PubMed, Embase, Scopus, Cochrane Library, Web of Science, and ScienceDirect electronic databases. No language limitations, filters or publication date restrictions were applied. A DerSimonian-Laird random-effects model was used. The endpoint measure, quantified and reported as pooled risk ratio (RR) with 95% confidence interval (CI), was CI- AKI incidence. The influence of the removal of 1 study each time on RR was measured to establish the impact of individual trials on the pooled effect size. Heterogeneity was graded using the I2 statistic.

Results: A total of 8 RCTs were included (n=4984). The incidence of CI-AKI was 3.9% in the statin group (n=2480) and 7.0% in the control group (n=2504). In the pooled analysis patients receiving statins had 46% lower relative risk (RR) of CI-AKI compared with the control group (RR: 0.54, 95% CI 0.38-0.78, p=0.001). A moderate degree of non-significant heterogeneity was present (χ2=12.500, p=0.099, I2 = 41.9%, T=0.100). The relative weight of each study on the pooled RR was estimated.

Conclusions: Statin pre-treatment leads to significant reduction in CI, and should be strongly considered in all patients who are planned for diagnostic and interventional procedures involving contrast-media administration.