Journal of Cardiovascular Computed Tomography 13 (2019) S19

Contents lists available at ScienceDirect

Journal of Cardiovascular Computed Tomography

journal homepage: www.elsevier.com/locate/jcct

2019-A-36-SCCT

Abstract 19: Probability Of Finding Significant Obstructive Coronary Artery Disease By Coronary Ct Angiography In Patients Age 65 And Below In A Large, Multi-physician Outpatient Cardiology Private Practice

Saachi Singal (High School)[1], Ayushi Agarwal (High School)[2], Yesh Dhruva (High School)[2], Ronak Agarwal (High School)[2], Mayank Agarwal (M.D.)[3], Rajiv Agarwal (M.D.)[4]

[1] *Katy Taylor High School, Katy, TX, USA*
[2] *Clements High School, SUGAR LAND, TX, USA*
[3] *UTMB Medical School, Galveston, TX, USA*
[4] *Vital Heart & Vein, Humble, TX, USA*

Introduction: Cardiovascular disease remains the most common cause of mortality overall in United States of America. Majority of coronary artery disase (CAD) data is from academic institutions even though significant percentage of patients with cardiovascular symptoms see cardiologists in the private setting. We analyzed coronary computed tomographic angiogram (CCTA) results in patients ages 65 and below from a busy outpatient cardiology private practice to determine probability of obstructive CAD and to determine the age group at which coronary atherosclerosis is detectable.

Methods: We analyzed 769 consecutive ambulatory outpatients ages 65 and below that underwent CCTA from January 2015 to December 2016 for evaluation of CHD using a 64 detector CTA. Patients were broken down into following groups of age (40 and below, 41-45, 46-50, 51-55, 56-60, and 61-65). We evaluated total coronary artery calcium score (CCS) and severity of luminal stenoses for each group. Stenoses were assigned: none, non-obstructive (< 50%), and obstructive (> 50%).

Results: As shown in the table, for ages 40 and below, 69 (86%) patients did not have any identifiable luminal stenoses and 0 (0%) patients had significant obstructive CAD. For the other age groups, the calcium score increased with increased age; however, there was no correlation of age with probability of finding significant obstructive CAD (range 2 to 7%).

Conclusions: 1) In patients ages 40 and below, the probability of finding significant obstructive coronary artery disease is 0%. This suggests that CCTA should not be routinely ordered in private practice for evaluation of CAD in this age group. 2) Coronary artery atherosclerosis is detectable starting at a young age (14% of patients ages 40 and below, and 32% of patients ages 41-50); this suggests that aggressive preventive methods may need to be instituted at younger ages to reduce future CAD mortality.

Age Group	Total Patients	CCS	No Stenosis	<50%	>50%
40 and Below	80	7.95	69 (86%)	11 (14%)	0 (0%)
41-45	87	47.68	60 (69%)	22 (25%)	5 (6%)
46-50	114	26.64	70(61%)	42 (37%)	2 (2%)
51-55	114	110.42	62 (54%)	44 (39%)	8 (7%)
56-60	133	174.17	59 (44%)	69 (52%)	5 (4%)
61-65	241	339.5	138 (57%)	94 (39%)	9 (4%)
All Ages	769	161.71	458 (59%)	282 (37%)	29 (4%)

https://doi.org/10.1016/j.jcct.2018.12.023

Available online 05 January 2019