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Atherosclerosis Prevalence Within Populations of the Southeastern United States

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Abstract : A prevalence cohort study of atherosclerotic lesions within cadavers was performed to better understand and characterize the prevalence of atherosclerosis among Georgia residents within body donors in the Philadelphia College of Osteopathic Medicine (PCOM) - Georgia body donor program. We procured specimens from cadavers used for medical students, physical therapy students, and biomedical science students cadaveric anatomical dissection at PCOM - South Georgia and PCOM - Georgia. Tissues were prepared using hematoxylin and eosin (H&E) stainas histological slides by Colquitt Regional Medical Center Laboratory Services. One section from each of the following arteries was taken after cadaveric dissection at the site of most calcification palpated grossly (if present): left anterior descending coronary artery, left internal carotid artery, abdominal aorta, splenic artery, and hepatic artery. All specimens were graded and categorized according to the American Heart Association's Modified and Conventional Standards for Atherosclerotic Lesions using x4, x10, x40 microscopic magnification. Our study cohort included 22 cadavers, with 16 females and 6 males. The average age was 72.54, and the median age was 72, with a range of 52 to 90 years old. The cause of death determination listing vascular and/or cardiovascular causes was present on 6 of the 22 death certificates. 19 of 22 (86%) cadavers had at least a single artery grading > 5. Of the cadavers with at least a single artery graded at greater than 5, only 5 of 19 (26%) cadavers had a vascular or cardiovascular cause of death reported. Malignancy was listed as a cause of death on 7 (32%) death certificates. The average atherosclerosis grading of the common hepatic, splenic and left internal carotid arteries (2.15, 3.05, and 3.36 respectively) were lower than the left anterior descending artery and the abdominal aorta (5.16 and 5.86 respectively). This prevalence study characterizes atherosclerosis found in five medium and large systemic arteries within cadavers from the state of Georgia.

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