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Stable Ischemic Heart Disease

ATHEROSCLEROSIS IN ANCIENT AND MODERN EGYPTIANS: THE HORUS STUDY

Poster Contributions

Hall C

Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Interventional Imaging Modalities and Treatments for Atherosclerotic Heart Disease

Abstract Category: 25. Stable Ischemic Heart Disease: Clinical

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Background: Although atherosclerosis (Ath) is commonly believed to be a modern disease, CT evidence of Ath is common among Egyptian mummies (Mum). We sought to compare the prevalence of Ath in ancient & modern Egyptians (Mod).

Methods: We compared the presence & extent of vascular calcifications (Ca) from whole body CT scans of 178 consecutive Mod undergoing recent PET/CT for cancer staging in Cairo to CT scans of 76 Mum (3100 BCE-364 CE).

Results: Mean age of Mod was 52.3 [\pm SD 15] y (range 14-84 y) vs estimated age at death of Mum 36.5[13] y (range 4-60 y); $p < 0.0001$. Males were 104/178 (58.4%) of Mod & 48/74 (59.3%) of Mum, $p = \text{NS}$. Ca was detected in 108/178 of Mod pts (60.7%) vs 26/76 (38.2%) of Mum, $p < 0.001$. The mean age for Mod was 61 [SD 10.5] y for those with Ath vs 39 [10.1] y for those without ($p < 0.0001$). Number of arterial beds involved: Mean age 39 [SD 10.1] y for Mod with no Ath, 56 [9.5] y for those with Ath in 1 or 2 beds & 65.7 [9.2] y with Ath in ≥ 3 beds; $p < 0.0001$. Mean age of Mum at time of death was 42.7 [SD 10.2] y with Ath vs 32.7 [12.4] y for those without ($p < 0.0001$). Number of arterial beds involved: Mean age was 32.7 [SD 12.4] y for Mum with no Ath, 41.4 [10.9] y for those with Ath in 1 or 2 beds & 45.9 [7.9] y for those with Ath in ≥ 3 beds. When Mod pts > 60 y were excluded, Ath prevalence & severity were comparable in Mod & Mum (Figure).

Conclusion: While many ancient Egyptians died at a young age from childbirth, infection and trauma, those who survived to adulthood had an increasing prevalence of Ath with aging, similar to modern Egyptians.

