



ATHEROSCLEROSIS IS COMMON IN ANCIENT HUMANS: RESULTS OF THE HORUS STUDY OF ANCIENT EGYPTIAN MUMMIES

ACC Oral Contributions

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Background: Atherosclerosis (ath) is generally believed to be a disease of modern humans.

Methods: In order to investigate the incidence of ath in ancient humans we performed whole body multislice CT scans (Siemens Emotion 6 or GE LightSpeed, 1.25 mm thickness, kV 130) on 52 ancient Egyptian mummies (aged 1800-3800 yrs) searching for arterial wall calcification. Age at death was estimated by a 5-point skeletal scoring system.

Results: Of the 52 mummies (32M/18F/2unknown), identifiable arteries were present in 42, an identifiable heart was present in 17, and 43 had either heart or arteries present. Twenty of these 43 had calcifications either in the wall of an artery or along the course of an artery - diagnostic of or highly suggestive of ath. Calcifications were identified in the carotid, subclavian, iliac, femoral, popliteal, and tibial arteries and the aorta. See figure of tibial artery calcification. The 20 mummies with ath were older (mean 45.1 ± 9.2 y) than mummies with CV tissue but no ath (33.4 ± 11.6 y, $p < .004$). There were 6 mummies with ath in > 3 vascular beds and age at death of this group (46.3 ± 4.7 y) was greater than the mummies with less extensive ath (1-2 beds) (44.6 ± 10.7 y) or those with no ath (33.4 ± 11.6 y, $p < .05$). The frequency of ath did not differ between genders.

Conclusions: Ath can be identified in nearly all arterial vascular beds in this group of ancient humans. The finding of ath in the carotids is novel. The data suggest that genetic factors resulting in ath are more important than previously appreciated.

