Abstract: P1529

Coronary and aortic atheroma are not identical diseases: A calcium score comparative study in 1010 patients with a normal SPECT

Authors:
J-M Foult1, S Katsahan2, C Nevoret2, O Hoffman1, P Sabouret1, B Attal1, G Friedlander3, 1 American Hospital of Paris - Neuilly sur Seine - France, 2 European Hospital Georges Pompidou - Paris - France, 3 University Paris-Descartes - Paris - France,

Topic(s):
Prevention – Cardiovascular Risk Assessment: Imaging

Citation:
Calcium scores of the coronary arteries (CCS) and – more recently- of the the thoracic aorta (TCS), have been established as risk markers for cardiovascular events. Yet, little is known about the relationship between these two calcium scores.

In this study, CCS and TCS were compared in 1010 patients with a normal SPECT. Mean age was 64.5 +/- 8.7 yrs with 73.4% of men. CCS and TCS ranged between 0 and 5827 for CCS and from 0 to 58600 for TCS, with means of 281.1 and 1206 respectively. Such a difference was expected since the vascular surface of the thoracic aorta is approximately 5 times larger than that of the coronary arterial tree. Both CCS and TCS increased with the number of risk factors (p= 0.000841 and p =0.000579)

No significant relation was found between CCS and TCS for the entire group. However, when adopting a best-fitting curve model, 2 populations could be clearly identified: those with predominant TCS (N=552), and those with a- relatively- predominant CCS – (N=458).

In each of these two groups, CCS and TCS were significantly related (τ = 0.63 and 0.69 respectively p < 2.2e-12). Both groups had a comparable exposition to smoking and diabetes, but Group1 patients had more dyslipemia and high blood pressure than group 2 patients.

CONCLUSION: Calcified atheroma was frequently observed In patients with a normal SPECT, but no significant relation existed between CCS and TCS ; patients with a predominant atheroma of the coronary arteries were not the same than patients with a predominant atheroma of the aorta, with both groups having different expositions to risk factors. This suggests that atheroma of the coronary arteries and of the thoracic aorta are close but not identical diseases.
Abstract: Coronary and aortic atheroma are not identical diseases: A calcium score comparative study in 1010 patients with a normal SPECT.

Authors: J-M Foult, S Katsahian, C Nevoret, O Hoffman, P Sabouret, B Attal, G Friedlander.

Topic(s): Prevention – Cardiovascular Risk Assessment: Imaging

Citation: Calcium scores of the coronary arteries (CCS) and – more recently – of the thoracic aorta (TCS), have been established as risk markers for cardiovascular events. Yet, little is known about the relationship between these two calcium scores.

In this study, CCS and TCS were compared in 1010 patients with a normal SPECT. Mean age was 64.5 ± 8.7 yrs with 73.4% of men. CCS and TCS ranged between 0 and 5827 for CCS and from 0 to 58600 for TCS, with means of 281.1 and 1206 respectively. Such a difference was expected since the vascular surface of the thoracic aorta is approximately 5 times larger than that of the coronary arterial tree. Both CCS and TCS increased with the number of risk factors (p = 0.000841 and p = 0.000579).

No significant relation was found between CCS and TCS for the entire group. However, when adopting a best-fitting curve model, 2 populations could be clearly identified: those with predominant TCS (N=552), and those with a relatively predominant CCS – (N=458).

In each of these two groups, CCS and TCS were significantly related (r = 0.63 and 0.69 respectively p < 2.2e-12). Both groups had a comparable exposition to smoking and diabetes, but Group1 patients had more dyslipemia and high blood pressure than group 2 patients.

CONCLUSION: Calcified atheroma was frequently observed in patients with a normal SPECT, but no significant relation existed between CCS and TCS; patients with a predominant atheroma of the coronary arteries were not the same than patients with a predominant atheroma of the aorta, with both groups having different expositions to risk factors. This suggests that atheroma of the coronary arteries and of the thoracic aorta are close but not identical diseases.