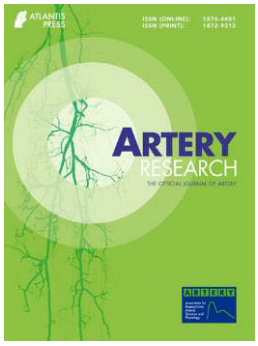

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P2.57: IMPAIRED ENDOTHELIAL FUNCTION MAY UNDERLIES INCREASED ARTERIAL STIFFNESS IN SOUTH ASIAN STROKE SURVIVORS COMPARED TO EUROPEAN CAUCASIANS COUNTERPARTS IN THE UNITED KINGDOM

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Results: Lean mass was positively correlated with the three T-scores accounting for 11.6%, 26.6% and 12.2 % of the variability in lumbar spine L1-L4, femoral neck and total body BMD T-scores respectively. Fat mass had no effect on BMD. However, fat mass was positively correlated with aortic PWV accounting for 9.8% of its variability. Lean mass was not a determinant of PWV. Hypertension, diabetes and dyslipidemia were associated with higher PWV but had no effect on BMD.
Conclusions: In males from a general population over 60 years of age, bone and arterial aging are differently influenced by lean and fat mass. Our results indicate that elderly men with high lean mass and low fat mass exhibit the best arterial and bone profile, with the lowest arterial stiffness and the highest BMD.

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IMPAIRED ENDOTHELIAL FUNCTION MAY UNDERLIES INCREASED ARTERIAL STIFFNESS IN SOUTH ASIAN STROKE SURVIVORS COMPARED TO EUROPEAN CAUCASIANS COUNTERPARTS IN THE UNITED KINGDOM

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Background: The pathophysiology of excessive premature cerebrovascular disease mortality amongst South Asian stroke survivors (SA) living in Britain remains unclear. We hypothesised that South Asian stroke survivors with underline impaired endothelial function have increased indices of higher arterial stiffness compared to their European Caucasian (EC) counterparts and these structural and functional vessel wall abnormalities and would account for their excess disease burden
Methods: Endothelial dependent vessel dysfunction (RI) (post Salbutamol), independent (post Glyceryl Tri Nitrate) administration and arterial stiffness (SI) was measured by digital volume pulse photoplethysmography in 60 South Asian stroke survivors and compared to 60 age-gender matched European Caucasians in a temperature controlled environment using a direct, standardised approach.
Results: Both ethnic groups were comparable for CHD risk profiles , except diabetes mellitus (SA: 54.1% vs. EC: 10.3%; $P<0.001$). SA had increased arterial stiffness [11.1(0.2) vs. (10.4(0.3)];$P<0.008$) and impaired endothelial dependent vascular function mean (SE) (3.68(0.4) vs. 8.0(0.3); $P=0.007$).On univariate analysis fasting plasma glucose level negatively related with RI($R=-0.37$; $P<0.001$) and on multivariate analysis diabetes status (($\beta=-4.3$; $P=0.009$) independently associated with endothelial dysfunction.
Conclusion: South Asians stroke survivors have an impaired endothelial dependent vascular dysfunction and increased arterial stiffness compared to European Caucasians. There appears to be an adverse and disproportional impact of glycemic status on the vascular system in South Asians. Pathophysiological differences in vessel wall characteristics amongst South Asians may explain their increased susceptibility to cerebrovascular disease and related outcomes.