

RISK FACTORS

“Looking old for your age” increases cardiovascular risk

Outward signs of ageing, such as balding, earlobe creasing, and xanthelasmata, are associated with increased risks of myocardial infarction (MI) and ischaemic heart disease (IHD). “This is the first prospective study to show that looking old for your age is a marker of poor cardiovascular health,” say the investigators.

The Copenhagen City Heart Study of the Danish general population was initiated in 1976, and follow-up assessments have been conducted each decade since. To investigate the association between signs of ageing and cardiovascular disease, investigators randomly selected 19,329 individuals from the National Danish Central Person Registry. Complete baseline data on the variables of interest were available for 10,885 of these individuals, who were, therefore, included in the study.

None was lost to follow-up (mean 23 years).

Participants were inspected for male pattern balding, grey hair, facial wrinkles, earlobe creasing (a diagonal fold or wrinkle in the skin of the earlobe), xanthelasmata (cholesterol deposit on the eyelids), and arcus corneae (cholesterol deposit in the cornea). During follow-up, 3,401 participants developed IHD, 1,708 had an MI, and 7,722 died.

The investigators used multifactorial adjustment for established cardiovascular risk factors and markers of socioeconomic status, including age, sex, total-cholesterol level, triglyceride level, BMI, hypertension, diabetes mellitus, smoking status, alcohol consumption, physical activity, education, and income. After adjustment, baldness, earlobe creasing, and xanthelasmata remained independently associated with increased cardiovascular risk. In men, frontoparietal baldness was associated with an increased risk of MI (HR 1.40) and IHD (HR 1.14). Similarly, the adjusted hazard ratios for crown-top baldness were 1.13 and 1.09, respectively. The risk was similar in women, but less significant.

Individuals with earlobe creasing had an increased risk of MI and IHD (HR 1.09 for each), as did those with xanthelasmata (HR 1.37 for MI, and HR 1.30 for IHD).

Predictably, some individuals had more than one sign of ageing, which was associated with cumulative risk. Compared with those with no signs of ageing, those with three or four age-associated signs had an increased risk of MI (HR 1.57) and IHD (HR 1.40).

These outward signs of ageing might be physical manifestations of known cardiovascular risk factors. For example, male pattern balding has been associated with responsiveness to free testosterone, and the presence of xanthelasmata might be indicative of dyslipidaemia. However, this study was performed only in white individuals of Danish ancestry, and further studies will be required to determine whether the findings are applicable to populations of other ethnicities.

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