Title

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Abstract

Risk factors for facial telangiectasia

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Background
Telangiectasia or red veins are one of the main features of facial skin aging. To date there are few studies investigating risk factors for telangiectasia. We investigated environmental risk factors in a population-based cohort study, using a digital continuous outcome measure.

Methods
Telangiectasia were quantified digitally from standardized 3-dimensional facial photographs of 2886 North- European participants (56.8% female, median age 66.9) from the Rotterdam Study, a prospective population-based cohort study. Age- and sex adjusted as well as fully adjusted multivariable linear regressions were performed to investigate associations between potential environmental factors and the amount of telangiectasia. Men and women were analyzed separately.

Results
The mean facial area covered by telangiectasia was higher in women (median area 0.95%, interquartile range 0.62- 1.4) than in men (median area 0.76%, interquartile range 0.48-1.2). Besides age (men ß=0.016, P-value<0.001; women ß=0.016, P-value<0.001), smoking (men ß=0.29, P-value<0.001; women ß=0.32, P-value<0.001), a high susceptibility to sunburn (men ß=0.082, P-value<0.001; women ß=0.076, P-value<0.001) and light skin color (pale against olive-colored skin in men ß=0.26, P-value<0.001; in women ß=0.23, P-value<0.001) were independent significant factors contributing to telangiectasia for both sexes. Additionally in men, a lower education also showed an association (medium vs. high ß=0.062, P-value=0.008). Alcohol showed a negative association with telangiectasia (ß=-0.028, P-value<0.001). In women, a higher free androgen index was associated with less telangiectasia (ß=-0.0053, P-value<0.001).

Conclusion
In this large cohort study of facial telangiectatic photoaging, environmental factors associated with telangiectasia are described, implicating possible new prevention strategies for this form of skin aging.