

Correspondence

The diagonal ear-lobe crease. As sign of some diseases

To the Editor

We have read with great interest the paper by Bahcelioglu et al¹ regarding the diagonal earlobe crease (ELC) as a sign of diabetes mellitus, hypertension, myocardial infarction (MI), and coronary artery disease (CAD), and while congratulating them on their work, we would like to make some comments. Their conclusion supports our results and conclusions about a possible correlation between some dermatological signs (baldness, thoracic hairiness, hair graying, and diagonal ELC) and the risk of MI.² However, some investigators denied this association and pointed out that age might influence the appearance of ELC which is more commonly found in elderly persons.³ Bahcelioglu et al pointed out recent studies, which support a positive association between ELC and CAD.¹ We wish to remind authors and readers of our study published in 1998.² Namely, in our hospital-based case-control study, which included 842 men under the age of 60 years admitted for the first nonfatal MI, and 712 controls admitted with noncardiac diagnoses without clinical signs of CAD, we examined the association of dermatological signs with the risk of MI. Since the most important coronary risk factor is age, and with advancing age, ELC, baldness, hair graying and wrinkling of the skin are increasingly common, the hypothesis was set that the premature or extensive occurrence of these dermatological signs in males under 60 could identify a person with an accelerated aging/atherosclerotic process. In our study, all dermatological signs were more common among cases compared to control. Logistic regression revealed the parietal baldness and the diagonal ELC as strongest predictors of MI. We extrapolated that the diagonal ELC could correlate with the local vascular insufficiency and consequent skin atrophy, and it could be an indicator of atherosclerosis. Our results suggest that the ELC is as predictive of CAD as some established risk factors, like smoking or presence of diabetes mellitus. However, it is not likely that the ELC has more than an indirect relationship with CAD. Therefore, our 2 studies support the theory that the ELC is an important dermatological indicator of increased risk of CAD, and it might be a useful diagnostic tool in the clinical examination of patients.

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Reply from the Authors

We thank Drs. Fabijanic, Miric, and Radic for their interest and valuable contributions to our paper. However, we wish to make some comments. Dr. Miric et al suggested that the ELC is as predictive of CAD as some established risk factors, like smoking or presence of diabetes mellitus, but could not be related directly to the diseases.² Our statistical results were based on a field study of various age groups and showed a strong association between ELC and DM, MI and CAD,¹ which is supported by several authors.⁴⁻⁷ We believe that there is more to this than an indirect relationship between ELC and diabetes mellitus, hypertension, myocardial infarction (MI), and coronary artery disease (CAD). This might be based on a mutual physiopathological mechanism, which needs further investigation. It may be important to include the ELC grade in the postmortem examination of forensic sudden death cases as a predictive sign of natural causes of death, and would be a valuable sign for carrying out population screening for systemic vascular diseases.

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References

1. Bahcelioglu M, Isik FA, Demirel B, Senol E, Aycan S. The diagonal ear-lobe crease. As sign of some diseases. *Saudi Med J* 2005; 26: 947-951.
2. Miric D, Fabijanic D, Giunio L, Eterovic D, Culic V, Bozic I, Hozo I. Dermatological indicators of coronary risk: a case-control study. *Intern J Cardiol* 1998; 67: 251-255.
3. Cheng TO. More research needed on the association between diagonal earlobe crease and coronary artery disease. *Arch Intern Med* 2000; 160: 2396-2397.
4. Tranchesi B, Barbosa V, Piva de Albuquerque C, Caramelli B, Gebara O, dos Santos Filho RD, et al. Diagonal earlobe crease as a marker of the presence and extent of coronary atherosclerosis. *Am J Cardiol* 1992; 70: 1417-1420.
5. Patel V, Champ C, Andrews PS, Gostelow BE, Gunasekara NPR, Davidson AR. Diagonal earlobe creases and atheromatous disease: a postmortem study. *J R Coll Physicians Lond* 1992; 26: 274-277.
6. Shoenfeld Y, Mor R, Weinberger A, Avidor I, Pinkhas J. Diagonal ear lobe crease and coronary risk factors. *J Am Geriatr Soc* 1980; 28: 184-187.
7. Cumberland GD, LeRoy R, Vinson R. Earlobe creases and coronary atherosclerosis. The view from forensic pathology. *Am J Forensic Med Pathol* 1987; 8: 9-11.