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LETTER TO THE EDITOR

Dietary Assessment and Cardiovascular Disease Risk Scores

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According to a recently published editorial article in the Open Hypertension Journal written by Anagnostis et al., [1] adherence to a Mediterranean type diet was associated with reduced cardiovascular disease (CVD) risk, by modulating arterial blood pressure levels. Hypertension consist, both a traditional risk factor with increasing prevalence among older subjects [2] and specific subpopulations (i.e., metabolic syndrome) as well as a high-yield target in means of primary and secondary prevention. The common CVD risk scores (e.g., Framingham score sheet, ESC SCORE) [3,4] that are implicated in individual CVD risk assessment through easily measured characteristics constantly incorporate arterial blood pressure indices in underlying estimation models [3,4]. Accumulating evidence [5] suggests that adherence to healthier dietary patterns is associated with favorable CVD profile; i.e., in 2008 the INTERHEART study with approximately 16,500 participants concluded that 30% of CVD deaths in Europe could have been prevented through adoption of healthier dietary habits [6].

Despite emerging associations between dietary patterns and CVD risk, diet's assessment has never been, directly, incorporated into existing CVD risk scores [5]. Researchers who added diet's assessment into CVD risk estimation models, reported incremental value of the dietary component over traditional risk factors in terms of overall model performance and improved reclassification of the true events [7,8]. In addition, updating CVD risk estimation scores with dietary information could improve the correct classification rate of people at high risk. This suggestion is further reinforced by the aforementioned editorial, which identifies unhealthy dietary patterns as a risk factor for adverse CVD events, independently of blood pressure status and lipid profile.

The individual CVD risk estimation is highly recommended by the European guidelines for the majority of middle-aged people, even without known CVD history [9]. Under this context, classification rate improvement of the

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existing CVD risk estimation scores should be addressed as a cardinal issue in terms of public health policies. Dietary patterns assessment should be examined as the most promising candidate parameter for incorporation into the existing CVD risk estimation scores in order to upgrade current prevention strategies.

CONFLICT OF INTEREST

The author(s) confirm that this article content has no conflicts of interest.

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REFERENCES

- Anagnostis P, Sfikas G, Gotsis E, Karras S, Athyros VG. Is the [1] beneficial effect of Mediterranean diet on cardiovascular risk partly mediated through better blood pressure control? Open Hypertens J 2013, [In press].
- [2] Panagiotakos DB, Chrysohoou C, Pitsavos C, et al. The association of Mediterranean diet with lower risk of acute coronary syndromes in hypertensive subjects. Int J Cardiol 2002; 82: 141-7.
- [3] Kannel WB, McGee D, Gordon T. A general cardiovascular risk profile: the Framingham Study. Am J Cardiol 1976; 38: 46-51.
- Conroy RM, Pyörälä K, Fitzgerald AP, et al. SCORE project group. Estimation of ten-year risk of fatal cardiovascular disease in Europe: the SCORE project. Eur Heart J 2003; 24: 987-1003.
- Georgousopoulou EN, Pitsavos C, Yannakoulia M, Panagiotakos [5] DB. The role of dietary patterns' assessment in the predictive ability of cardiovascular disease risk estimation models: a review. Int J Food Sci Nutr 2013 Aug 15. [Epub ahead of print]
- [6] Igbal R, Anand S, Ounpuu S, et al. INTERHEART Study Investigators. Dietary Patterns and the Risk of Acute Myocardial Infarction in 52 Countries: Results of the INTERHEART Study. Circulation 2008; 118: 1929-37.
- Panagiotakos DB, Pitsavos C, Stefanadis C. Inclusion of dietary evaluation in cardiovascular disease risk prediction models increases accuracy and reduces bias of the estimations. Risk Anal 2009; 29: 176-86.
- [8] Baik I, Cho NH, Kim SH, Shin C. Dietary information improves cardiovascular disease risk prediction models. Eur J Clin Nutr 2013; 67: 25-30.
- [9] Perk J, G De Backer, H Gohlke, et al. European guidelines on cardiovascular disease prevention in clinical practice (version 2012). Eur Heart J 2012; 33: 1635-701.