Editorial / Editöryal Yorum

Assessment of awareness of risk factors and heart healthy lifestyle as a part of routine cardiovascular evaluation in secondary prevention

İkincil korunmada rutin kardiyovasküler bakının bir parçası olarak risk faktörleri ve kalp sağlığına uyumlu yaşam tarzı farkındalığının değerlendirilmesi

Meral Kayıkçıoğlu M.D. (ID)

Department of Cardiology, Ege University School of Medicine, İzmir, Turkey

The growing burden of non-communicable diseases, especially cardiovascular (CV) diseases, constitutes a public health threat for the whole world. Effective preventive measures, especially combating lifestyle and CV risk factors, have the capacity to reduce the CV events by 40-80% depending on the population studied.[1,2] As emphasized in all treatment guidelines, patients' active role in treatment and clinical decision making and awareness of the CV risk factors are extremely important in control of risk factors and reducing CV events.[1,2] Moreover, patients' specific knowledge of their own CV status and risk level correlate with the adherence to drug treatment and adoption to heart healthy lifestyle.[3,4] However, awareness of CV disease and its risk factors is still low both in primary and secondary prevention patients.

In their recent work in *Archives of Turkish Society of Cardiology*, Aydın et al.[5] provide important results about the awareness of patients in secondary prevention. They have conducted a cross-sectional study in the cardiology outpatient clinics of 2 tertiary-level hospitals and one secondary-level hospital in 3 different regional territories of Turkey in 2018. A total of 912 patients who were already on medical treatment for coronary artery disease (CAD) confirmed with a coronary angiography were evaluated with a 45-item questionnaire investigating their secondary prevention awareness and lifestyle. The survey instrument covered a broad range of questions on demographic characteristics, comorbidity,

Abbreviations:

BMI   Body mass index
CAD   Coronary artery disease
CV   Cardiovascular

major CV risk factors including diabetes mellitus, hypertension, dyslipidemia, obesity etc, psychological status (depression and anxiety), medical therapies and lifestyle including daily exercise, diet, herbal therapy, and sexual life. Aydın et al.[5] showed that half of the study population (55.7%) was aware the status of their own coronary artery lesions, i.e, the results of previous coronary angiography. Likewise, more than 90% of the patients were unaware that CAD develops as a result of occlusion of the heart vessels in relation with a plaque. For obesity, almost 90% of the patients were not aware of high body mass index (BMI) values posed a risk for CV disease. Likewise, only 3.3% were aware of their own waist circumference and 13% were aware of the increased waist circumference as a risk of CV disease. More importantly, nearly half of those who knew the importance of BMI has received this information from the media (social and visual) not from their attending physicians or health care provides. Status of healthy life behavioral changes in this secondary prevention population showed consistent results for risk factors. More than half of the participants were not performing any form of exercise. More than half did not have any information about the protective effect of exer-

Correspondence: Meral Kayıkçıoğlu, M.D. Department of Cardiology,
Ege University School of Medicine, İzmir, Turkey
Tel: +90 532 4123489 e-mail: meral.kayikcioglu@gmail.com

cise with regard to CV disease. Again, the majority of those who think that exercising is important has reported that they had received this information from the media (social and visual) not from physicians. For smoking almost 90% were aware of its worsening effects on CV disease and less than half (46%) were aware of the harm of high blood pressure. And the information was again has received form the media in the majority. For diet, almost 80% were knowing that heart healthy diet was important for the prevention of the progression of heart disease, however one third of the population were not following any specific diet. Moreover, only 19.3% reported that keeping blood sugar levels in a normal range was important for the prevention of CV events. Awareness of the relationship between low-density lipoprotein and CV disease was also very low (18%). Again, almost 80-90% of all these information was learnt from social media.

All these results are very similar to that observed in the EUSROAPIRE III and IV Studies' Turkish arms which were conducted in the years 2006-7 and 2013-14 respectively, for exploring the effectivity of secondary prevention measures.[6-8] Though getting to guideline recommended goals to prevent further CV events is essential, the present work denotes the suboptimal level of the secondary prevention efforts and risk factor control in Turkey.[8] The most prevalent risk factors in patients hospitalized for acute coronary events are hypercholesterolemia (60.2%), hypertension (49.5%), smoking (48.8%), and diabetes (37.9%)[8,9] in Turkey. Though, acute coronary syndrome patients are prescribed medications in line with the recent guidelines at discharge, medication use is significantly decreases 6 months after discharge and onwards.[7,8] Moreover, evaluation of patients 6 to 36 months after an index coronary event has revealed that 25.5 % were still smoking, more than half were hypertensive, 80.9% was overweight (BMI ≥25 kg/m^2), and 30% was obese (BMI ≥30 kg/m^2) and fasting blood glucose was >126 mg/dL in 29.2%.[7,8] The most important result of the present work that should be emphasized is high rate of patients receiving information about CV risk factors from the social or mass media rather than the following physicians. Therefore, knowledge about own risk factors is also low in that population leading to low adherence to therapy and heart healthy lifestyle. These results also support the need of special cardiac rehabilita-

tion or prevention clinics for secondary prevention patients. According to EUROASPIRE III, only 7.3% of patients discharged after CV events are attending structured cardiac rehabilitation programs in Turkey.[6] Although cardiac rehabilitation is reimbursed, the number of structured multidisciplinary secondary rehabilitation centers needs to be increased.[8]

Aydın et al.[5] also provide important results on the use of herbal therapy; 41% of the patients has used herbal products for heart disease and more than one third (37%) were receiving herbal derivatives to increase sexual performance. These results also highlight the preference of herbal agents and indirectly the inadequacy of time spent for the education of patients by the physicians.

The lack of data about the severity, type, and duration of CAD are among the limitations as acknowledged by the authors. The evolution of the relationship between the level of awareness and the time/type of CAD (acute, chronic, bypass, and stent) in terms of risk factors and drugs are also lacking. Presenting an overall awareness score and level of adherence to therapy and risk factor management would increase the strength of the study. However, the major limitation is the use of a non-validated non-standardized questionnaire constructed by the researchers. Surveys and questionnaires are widely used instruments for CV research to collect quantitative data from both patients and health-care providers. Questionnaires not only used for gathering general information about a specific disease, treatment, or problem but also help legislators in identifying how to adopt tailored and effective policies and interventions to improve the care. However, the questions of the surveys must be well-prepared to collect accurate and reliable data according to the hypothesis of the study. Short, not time consuming, easy to apply and easy to understand questionnaires consisting of meaningful and appropriate items are more effective in collecting unbiased responses and high-quality data. Many researchers prefer to use existing questionnaires, but in many situations proper questionaries may not be readily available, or the published questionnaires may not be valid in the language of the targeted respondents.[10] Therefore, investigators may need to develop new questionnaires or translate an existing one. But in any case, the questionnaire should show satisfactory validity and reliability (internal consistency and

reproducibility). For a good validation, researchers should first specify the information sought, then develop testing questions. A pilot testing is mandatory followed by determination of the reproducibility or reliability of the survey and finally validating the test against a "gold standard" is necessary for collecting unbiased data form specified respondents.

In conclusion, awareness of CV disease and its risk factors which is an important obstacle in the prevention of CV events is still low in patients with CAD followed in cardiology outpatient clinics. Aydın and colleagues provide important information that the major source of information about CV disease and risk factors is the social media which may denote the reluctance of physicians in educating patients. Their work also reminds the importance of using good constructed validated questionaries to collect accurate and reliable data on the awareness of the patients with CAD. Use of such simple and reliable awareness surveys as a part of routine clinical evaluation may further help to improve the management of CV disease and implementation of heart healthy lifestyle in secondary prevention.

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