Effectiveness of a standard secondary coronary prevention program: not obligate

Guidelines of authoritative bodies on cardiometabolic syndromes have provided recommendations for practicing physicians in the past quarter century, with a trend to stricter targets over time. Implementation of such recommendations has been periodically examined in primary (e. g., EUROASPIRE) or secondary coronary heart disease (CHD) prevention studies. Gong et al. (1) published in this issue of Anatol J Cardiol the article entitled "Using a standardized follow-up program to improve coronary heart disease secondary prevention," which assessed the effect of a standardized follow-up program on secondary coronary prevention in 496 patients with CHD who enrolled from hospitals in Beijing and compared with a control group of 300 patients without such a standardized follow-up. The mean age of the targeted group was 63.5 years, and 39% of them had a history of diabetes mellitus. On the basis of the data collected on conventional risk factor control, drug usage, and clinical events over a mean of 4.6 years' follow-up, it was concluded that the interventions did not cause a significant improvement in the body mass index (BMI) or physical activity, and although the use of lipid-lowering drugs significantly increased, the use of antiplatelet and antihypertensive medication did not significantly improve. Regarding the risk factor profile, although serum total and LDL-cholesterol levels were significantly lower after the standardized follow-up, the proportion of patients with hyperlipidemia was higher; the rate of blood pressure (BP) control did not improve and plasma glucose control deteriorated.

An asset of this study was the provision of prospective data regarding major adverse cardiovascular events (MACE) (1). Highly notable was that female patients and those without hyperlipidemia had higher incidence of MACE, irrespective of rates of risk factor control or drug usage. Heart failure alone was found to be strongly predictive of MACE, while hypertension tended to a lower association with MACE than normotension; this is consistent with our observation among Turkish women. When adjusted for age and BMI, those without compared with those with elevated systolic BP had similar incidence of diabetes risk and lower CHD mortality risk. (Can G, Onat A, et al. 2016) implicated that systolic BP is only a mediator of risk imparted by obesity. Apolipoprotein A-I levels, which are highly relevant in autoimmune activation, proved to mediate prehypertension among Turks (2).

The authors used a potential mechanism of autoimmune activation, underlying several of their intriguing findings and which was proposed in the Turkish Adult Risk Factor (TARF) study (3), among other diverse explanations. Women even in postmenopausal status are recognized to possess nearly half the CHD risk that men have, yet this difference was not observed in Turks (4). Gong et al. (1) reported in this study in females a 2.4-fold MACE risk as in males. This is most likely because of an enhanced oxidative stress and autoimmune activation. This contention is strongly supported by their finding of lower total and LDL-cholesterol levels after the standardized follow-up and hyperlipidemic patients displaying a reduced risk for MACE. Spontaneous decline of total and LDL-cholesterol levels often heralds manifestation of an autoimmune process, as evidenced by the development of rheumatoid arthritis (5) or new-onset diabetes (3) and is usually associated with "reduced" lipoprotein [Lp](a) levels (6). Low circulating Lp(a) has also been reported to predict type-2 diabetes (7, 8). Incident atrial fibrillation is a newcomer to these states shown to be predicted ("paradoxically") by low total and LDL cholesterol levels (9), also newly confirmed among Turks (Şimşek B, Onat A, et al., 2015, as yet unpublished).

Other circulating polypeptides or proteins have been demonstrated to be involved in an oxidative stress-induced autoimmune activation; these include creatinine (10, 11), thyroid-stimulating hormone (12), asymmetric dimethylarginine (13), and HbA1c (14).

The authors' multivariable adjusted Cox models did not include the assessment of current smoking compared with the risk of MACE, but repeated and consistent data in TARF clearly revealed that current smoking favorably influenced (15) and that its discontinuance increased autoimmune-induced cardiometabolic risk. Parallel reports on Norwegians (16) and Polish women (17) were confirmatory.

In conclusion, practice guidelines are good to be used for a majority of people at risk; however, they need to be diversified to offer an adequate applicability to people prone to impaired glucose tolerance. The studied Chinese population having a mean HbA1c of 6.8% is an example for this statement.

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