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EDITOR'S PAGE

Socioeconomic status and cardiac disease in Europe: A modern-day problem in the era of economic crisis

As most of the morbidity and mortality in Europe is attributed to cardiovascular disease (CVD),[1] efforts to understand the relative and absolute impact of several components, namely risk factors, are of importance. Moreover, at the moment, from the known "classical" risk factor models, we can determine only part of the cardiovascular morbidity, while a significant proportion of cardiac events remain unexplained even when validated risk score applications are used.[2,3] Hopefully, coronary artery disease (CAD) incidence in Europe is estimated as half of that in the 1980s, mainly because of the adoption of preventive measures and smoking cessation.[4] Evidently, inequalities between region and countries exist, and CVD mortality has declined, especially in high-income countries.[1,5]

Recently, data from less developed countries of eastern Europe have become available and have been incorporated in disease statistics, although economic crisis has affected most of the European countries, however, with considerable intra-country variability. Profoundly, these alterations in socioeconomic status have affected the lifestyle, every day habits, prevention policies, and health systems, thus raising the interest on the effect of income, occupation, and educational status in CVD development and progression.

However, the exact mechanisms driving cardiovascular events under specific socioeconomic status is not fully understood and can only partially (ranging from 15% to 60%) be attributed to physical inactivity, smoking, and alcohol consumption.[6] In depth analysis on the association of socioeconomic status with dietary habits and how dietary patterns change from unhealthy to healthy over the range of educational and income status is provide in the review article by Psaltopoulou et al[7] published in this issue of Hellenic Journal of Cardiology. From the review of the literature, it is apparent that beyond the general trend of consumption of unhealthy high-fat food with increased glycemic index in the population with lower socioeconomic status, the discrepancies observed in CVD risk are rather complex, underlying the need to further explore how life status and habits affect the incidence of CAD. Additionally, in this journal, it has been previously reported that CVD risk differs even in subjects with similar socioeconomic status living in eastern Aegean islands, which is attributed to differences in cultural, environmental, and lifestyle factors,[8] and this was also one of the most important conclusion of IKARIA study, which was based on an elderly population of low socioeconomic status with low rates of mortality.[9]

Unquestionably, the incidence of CVD morbidity and mortality has decreased because of not only preventive measures but also the advances in interventional techniques. In particular, in this issue of Hellenic Journal of Cardiology, development of invasive arrhythmia management is presented. The long-term clinical outcomes of implantable cardioverter defibrillator recipients have improved substantially; however, these subjects continue to face considerable complications.[10,11] Sideris et al[12] reported the indications and advantages of subcutaneous implantable cardioverter defibrillators in patients at risk of sudden cardiac death. As it is presented, subcutaneous implantable cardioverter defibrillators can efficaciously and safely manage episodes of ventricular tachycardia and fibrillation and are especially advantageous in young patients with a long life expectancy or in patients with previous complication due to the use of intravenous leads. In addition, Paraskevaidis S et al[13] demonstrated the excellent performance of catheter ablation in a cohort of patients using implantable cardioverter defibrillators presented with electrical storm. From their results, a single catheter ablation procedure can effectively suppress the clinical arrhythmia in almost 75% of cases and should be consider in each case of electrical storm as this approach may eliminate future episodes.

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Nevertheless, the incidence of cardiovascular events and quality of life of CAD patients has been modified because of better understanding of CAD pathophysiology, improvement in antiplatelet treatment, better coronary stent performance, and identification of several plaque characteristics associated with vulnerability and acute coronary syndromes.[14,15] Interestingly, Marketou M et al[16] presented data from a series of 47 patients demonstrating how stent type—bare-metal stent or sirolimus-eluting stent—affects coagulation parameters such as von Willebrand Factor, factor VIII, b-thromboglobulin, and platelet factor 4, especially during the first 6 months after stent implantation. These findings highlight the need for potent dual antiplatelet treatment, especially during the first six months after PCI, as it is recommended by current guidelines. Unsurprisingly, intravascular imaging techniques confer significantly to the understanding of the mechanisms underlying CAD progression and evolving of acute coronary syndromes,[17–19] and this was presented in an interesting case report by Koganti S et al.[20] Indeed, on the basis of the case of a 63-year-old female who presented with acute coronary syndrome, Koganti S et al demonstrated intraplaque hemorrhage by using a three-dimension reconstruction of optical coherence tomography.

As we reach the end of this editorial, I cannot omit to refer the significant contribution of imaging modalities and, especially, echocardiography[21] in the diagnosis and management of CVD, leading to early and appropriate management and improved outcome. Of note, Patrianakos et al presented an overview of the echo modalities used to guide invasive strategies in patients with complex congenital or acquired cardiac structural abnormalities in parallel with appropriate use criteria.[22] Interestingly, data on long-term echo follow-up of patients treated with interventional techniques are also presented and provide a useful clinical guide to physicians implicated in the management of these patients.

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