

## President's Page

# Women and Cardiovascular Disease

VLASSIS N. PYRGAKIS

*Department of Cardiology, "G. Gennimatas" Hospital, Athens, Greece*



**D**espite the significant reduction in the incidence of cardiovascular diseases in recent years in the USA and Europe (apart from the east), coronary artery disease and cerebrovascular stroke continue to be the main causes of death and disability in both men and women. It is a false impression, held not only by the public but also by the medical community, that these diseases are a male "privilege". Indeed, it should be noted that in Europe today, cardiovascular diseases are a more frequent cause of death in women (54%) than in men (43%).

The development of evidence-based medicine has led to daily clinical practice being increasingly based on the results of large, randomised, multi-centre studies that were aimed at improving the prevention and treatment of disease in both sexes. However, given the differences between the two sexes as concerns the incidence of cardiovascular disease, as well as the effectiveness of preventive and therapeutic measures, the lesser representation of women in large studies creates a problem. It is indicative that, in clinical studies of coronary artery disease or stroke that were published between 1997 and 2006, women made up only 27% of the population, while in many of those studies results were not given separately for each sex;<sup>1</sup> thus, there is a significant lack of data concerning cardiovascular diseases in the female sex.

This led the regulatory bodies, in both the USA and Europe, to encourage the greater participation of women in large studies related to cardiovascular diseases, or even the performance of studies with an exclusively female population.<sup>2</sup> In particular, the European Society of Cardiology incorporated into the European Heart Health Strategy (Euroheart) – a multi-faceted programme for research and action that is co-funded by the European Commission –

an organised attempt to improve the awareness of women themselves on the one hand, and doctors and researchers on the other, of cardiovascular diseases as manifested in women.

Indicative of the different treatment of women with possible cardiovascular disease is evidence showing that women with symptoms of ischaemic heart disease are less likely than men with similar symptoms to be referred for an exercise test or coronary angiogram,<sup>3</sup> while those with already proven coronary artery disease are less likely to undergo reperfusion therapy, in comparison with equivalent men, with the result that they have twice the risk of death or infarction during the follow-up period.

Of particular interest from the point of view of public health is the great significance that certain risk factors, such as smoking, have for women compared to men. It has emerged that the mortality from cardiovascular diseases is higher in women who smoke than in male smokers, even after allowing for other risk factors.<sup>4</sup> It seems that differences in the physiology of the cardiovascular system, as well as nicotine metabolism, render women especially vulnerable to smoking, even more so for those who are also taking contraceptive drugs.

As regards hypertension, the combination of gestation with hypertension is of great significance in a subpopulation of women and it is important to be aware of this during the monitoring and treatment of women who exhibit hypertensive disorders during pregnancy.

Furthermore, one must not overlook the special role of diabetes mellitus: women with diabetes have about double the increase in risk compared with male diabetics (4-6 times greater risk in women, 2-3 times greater in men).<sup>5</sup>

From the above data, which represent only a small part of the total that have emerged during recent years, two main conclusions stand out. On the one hand, in certain cases, women show significant differences from men as regards the incidence of cardiovascular diseases and the effect of standard risk factors on their probability of developing some such disease. On the other hand, they have been the victims of an unintentional, but real inequity on the part of the health care authorities concerning the prevention and treatment of cardiovascular diseases, mainly because of the lack of data until now, but also because of the myth of the “immunity” of women to cardiovascular diseases.

In any case, it seems that the awareness of this matter in recent years has started to bear fruit, resulting in an increase in our knowledge in relation to the special position of women in the spectrum of cardiovascular disease. The Hellenic Cardiological society, via its representatives, is participating actively in the action framework that has been designed by the regulatory authorities of the European Union in collaboration with the European Society of Cardiology, in order to transform this new knowledge into changes in clinical practice and behaviour. By applying the maxim, “Awareness, Acceptance of differences, and

Action against inequalities”, we hope that the inequities of the past will be eliminated in the future, so that women with cardiovascular diseases will be treated as equal to, if not the same as, men.

## References

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