

## Hypertension in Primary Care. Are We Aware of the Magnitude of the Problem and Are We Managing It Properly?

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Cardiovascular disease is the main cause of death in western countries. In general, the causes of such conditions are known and modifiable. Hypertension is the most common modifiable cardiovascular risk factor and it is estimated to be the cause of 6% of deaths throughout the world. A reduction in blood pressure to below recommended values (<140/90 mm Hg) could lower the incidence of cardiovascular events by 50%. Furthermore, control of blood pressure and other cardiovascular risk factors becomes even more important when other cardiovascular risk factors, such as diabetes mellitus in particular, are present because the association of hypertension and diabetes greatly increases the risk of cardiovascular disease, stroke, renal disease, or diabetic retinopathy. In recognition of this, the latest guidelines consider patients with diabetes and patients with established heart disease to be at equal risk in terms of prevention and control and so diabetic patients are included in the high-risk category.<sup>1-5</sup> In these patients, the recommended limits for both blood pressure and cholesterol levels are lower than for the nondiabetic population.

There is mounting evidence that tight control of blood pressure, cholesterol levels, and diabetes can help prevent cardiovascular disease, and a broad and effective range of therapeutic treatments is available to us. Nevertheless, unsatisfactory control of risk factors in the general population remains an important health problem.

In Europe, the registries done during the last decade in several European countries<sup>6</sup> showed a high prevalence of hypertension in the European population (in Spain, the prevalence was 47% for the population of

35-64 year-olds). What was striking was the limited number of patients treated—27% in Spain—and the low percentage of patients who achieved good blood pressure control (only 18.7% of hypertensive patients had blood pressure <140/90 mm Hg).

### CURRENT SITUATION

Two registries are presented in the current issue of the *REVISTA ESPAÑOLA DE CARDIOLOGÍA*, both done in a primary health-care setting. They give us an idea of the current outlook on the prevalence of cardiovascular risk factors in the general population attended in a primary health-care setting<sup>7</sup> and among patients over 65 years of age.<sup>8</sup> In the study by Baena et al,<sup>7</sup> which was done in a single urban health center, 57.9% of the patients assessed had at least one modifiable cardiovascular risk factor. The most common risk factors were smoking and hypertension, both with a prevalence of about 35%. Moreover, up to 10% of the population assessed had cardiovascular disease and so comprised a population at risk for whom secondary prevention measures should be taken.

Although the prevalence of hypertension reported in this study was lower than in the European registry, the findings agree with similar Spanish registries done in a primary health-care setting. The degree of blood pressure control has improved in recent years, but remains low. In the PRESCAP 2002 study of a population of hypertensive patients on pharmacological treatment and attended in primary health care, good blood pressure control was observed in just 36.1% of the patients.<sup>9</sup> Similar findings were reported in the study published in this present issue of the journal for a population of hypertensive patients over 65 years old.<sup>8</sup>

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### Prevalence of Risk Factors in Elderly Patients

The studies published in this issue of the *REVISTA ESPAÑOLA DE CARDIOLOGÍA* show that cardiovascular risk is greatest in elderly patients, in agreement with large epidemiological studies. The prevalence of risk

factors increases with age, except for smoking, which has increased in recent years among young people, particularly women. Among patients over 60 years old, the prevalence of hypertension is greater than 65%<sup>10</sup> and the findings presented in this issue confirm this high prevalence.<sup>7</sup> Likewise, the prevalence of cardiovascular disease shows a progressive increase with age, thus 68.3% of cardiovascular disease were detected in subjects aged 65 years or older.

Although elderly patients are a high-risk population, the control of risk factors is unsatisfactory, particularly in the case of blood pressure. In the subanalysis of the PRESCAP study,<sup>8</sup> the degree of control obtained in this population was 33.5%. This degree of control decreased as other associated risk factors increased, thus, only 12.9% of diabetic patients over 65 years old had blood pressure below 130/85 mm Hg—the recommended values as established by the authors. Despite unsatisfactory control, more than half the patients were being treated with only one drug, and in the infrequent event that a physician did change the therapeutic approach after detecting poor control of hypertension (17.5%), the most common approach was to change the antihypertensive agent. Furthermore, patients receiving a larger number of drugs were those with worst control of blood pressure—for patients treated with a combination of 3 drugs, only 25.7% had satisfactory control. This warrants reflection as it suggests we may be faced with a population at particular risk who, despite combination therapy, does not achieve satisfactory control of blood pressure. It is also likely that this group includes patients who have had cardiovascular disease for a long time and so hypertension, in association with other risk factors, may have caused structural changes in the artery wall. If this has indeed happened, it would be more difficult still to achieve adequate control of blood pressure, particularly systolic blood pressure. We can conclude from this that combined treatment with different drugs is necessary because most patients cannot be properly controlled with a single agent. Moreover, blood pressure control should be more aggressive in the early stages of disease and drugs that protect against damage to the artery wall should be used.

### The Importance of Diabetes Mellitus

Diabetes mellitus is taking on the proportions of an epidemic, partly due to obesity and sedentary lifestyles. The prevalence of obesity in Spain has been estimated to be 14.5% among adults, whereas those who are overweight are thought to comprise 39% of the population, but these percentages increase with age.<sup>11</sup> The prevalence of diabetes at the moment is similar to that of obesity, that is, 15.8% had diabetes in the registry presented here.<sup>7</sup> This prevalence also increases with age, reaching almost 30% among those

over 65 years old.<sup>7,8</sup> The prevalence of diabetes is in sharp contrast with that presented in previous registries, where it was around 6%. This may be partly due to the application of new diagnostic criteria for diabetes, but it also probably reflects a tendency related to aging, loss of healthy habits, and the increasing obesity of the population. We should also remember that these figures were obtained without carrying out any diagnostic procedures such as the glucose tolerance test, and so the true scale of the problem may not yet have been addressed.

The cardiovascular risk for patients with diabetes is considered as high, and such patients often present with other associated risk factors. Hypertension is a frequent concurrent disease associated with diabetes. Thus, among hypertensive patients of any age, the prevalence of diabetic patients was found to be 21.6%. The importance of primary prevention measures has been shown, but nevertheless, the probability of obtaining good control of blood pressure according to the studies presented in this issue of *REVISTA ESPAÑOLA DE CARDIOLOGÍA* is 4.6 times lower than in the nondiabetic population.

### FUTURE OUTLOOK

Recommendations derived from evidence-based studies often fail to be applied properly in real-life situations. The studies presented indicate that cardiovascular risk factors are highly prevalent in our patients and, specifically, they show how hypertension is managed in the primary health-care setting. We can conclude from this that correct actions are not always taken. In the particular case of hypertension, treatment is “too little, inappropriate, and late”—something that should make us pause for thought. Both studies found a high prevalence of cardiovascular risk factors, particularly hypertension, which increased with age. Single therapy was most often used despite unsatisfactory control of blood pressure. Furthermore, the physician decided to change the therapeutic approach in only 17.2% of patients with uncontrolled hypertension (who were on antihypertensive therapy). Therefore most patients are continuing with an unsatisfactory antihypertensive treatment. It could be argued that a significant percentage of uncontrolled patients did, in fact, have blood pressures very close to the therapeutic goal of 140/90 mm Hg and so the physician did not change the treatment because blood pressure measurements taken in the clinic may overestimate the true blood pressure due to the white coat effect.<sup>12</sup> Alternatively, many health professionals may lack knowledge of current guidelines, fail to apply them, or simply disagree with them. Guidelines provide the framework for treatment, based on evidence from randomized studies. However, if they are to be applied correctly, they must be distributed and studied. To do this, better

communication and collaboration among all medical specialties involved in the control of these patients would be necessary, and changes in the organizational structure would also be needed to optimize resources.

Additionally, the studies that form the basis for the guidelines usually select high-risk populations with established atherosclerotic disease. Thus, one may think that the benefits would be greater still if risk factors, in particular hypertension, were modified by applying preventative measures in the initial phases of the disease with drugs from therapeutic groups that have a beneficial effect on the artery walls. Therefore, studies are needed that tackle modifiable risk factors as a whole and the way in which they are being managed so that we can identify and address the problems that hamper an integrated approach to prevention and treatment of cardiovascular disease.

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