Is Masked Hypertension Related to Diabetes Mellitus?

To the Editor:

We recently read with interest the article by Franklin et al concerning the prevalence of masked hypertension (MH) in diabetes mellitus. Analyzing data from the IDACO (The International Database of Ambulatory Blood Pressure in relation to Cardiovascular Outcome) project, the authors revealed that 42.5% of the antihypertensive-treated diabetics had MH (normal clinic blood pressure [BP] and daytime BP within the hypertensive range) and 29.3% of the untreated hypertensive diabetic population had MH. The equivalent cardiovascular risk for the latter patients was higher than the risk for stage 1 of hypertension, but less when compared with stage 2 of hypertension.1

While reading this article, some questions occurred to us. We are not convinced that some of the criteria for diabetes mellitus diagnosis are appropriate. We believe that self-reported diagnosis of diabetes mellitus or use of antidiabetic drugs is doubtful as diabetes mellitus confirmation. In some countries, antidiabetic drugs, such as metformin, are accepted as treatment for prediabetes mellitus status. The use of these 2 criteria mentioned above, as well as time-honored approved criteria by the American Diabetes Association, may have had an effect on the real prevalence of diabetes mellitus in this analysis.2 Otherwise diagnostic diabetes mellitus criteria were sometimes different for the different studies included in the IDACO project.

In MH diagnosis, mean daytime ambulatory BP-monitoring values were compared with clinic BP values. In the studies included in the IDACO project, different types of ambulatory BP-monitoring devices were used and there were different intervals between BP readings. We believe that this may have had an influence on the mean values of daytime BP and may have interfered with MH diagnosis. The authors probably also used various time frames of daytime periods applied in particular studies included in the IDACO project. Furthermore, the authors only used daytime values for ambulatory hypertension diagnosis. We are convinced that the disregarding of nighttime ambulatory BP-monitoring values may have underestimated MH diagnosis. Recently published studies have revealed that nighttime BP values are directly associated with cardiovascular risk.3 According to us, nighttime BP values should also be used in MH diagnosis. In the analysis by Franklin et al,1 the hazard ratios comparing risk in the various BP categories were similar in diabetics and nondiabetics. Taking into consideration the fact that diabetics have higher nighttime BP values than nondiabetics and nighttime hypertension is more frequent in diabetic patients, the use of nighttime values in MH diagnosis by the authors may change this rather unexpected finding.4

Reading the article by Franklin et al1 undoubtedly provides important clinical implications concerning treatment of hypertension. The analysis of IDACO data confirmed that treatment of hypertension based only on clinical BP values is insufficient because of MH. We are convinced that nighttime BP values should be considered in MH diagnosis, and that this may further improve treatment results.

Disclosures

None.

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