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### Does the Metabolic Syndrome Need More Descriptive Studies or More Evidence of Its Involvement in Secondary Prevention? Response

¿El síndrome metabólico en España necesita más estudios descriptivos o más evidencia de su implicación en prevención secundaria? Respuesta

To the Editor,

As Cordero et al. state in the current issue of *Revista Española de Cardiología*, our research group describes the association between the cluster of vascular risk factors known as the metabolic syndrome (MS)<sup>1</sup> and the presence of subclinical and early vascular lesions that, once established, hardly ever return to normal.

The importance of this relationship lies in the fact that we know that MS doubles the risk of cardiovascular (CV) disease and triples the risk of CV death<sup>2</sup>; that it significantly increases the risk of advanced kidney disease<sup>3</sup>; and that patients with advanced kidney disease have an increased risk of death that can be almost 6-fold greater than that of patients with normal clearing.<sup>4</sup> In fact, when signs of kidney disease appear, the structural lesion is already established and, as prevention is considered the best strategy in managing these patients, it is crucial to detect the earliest abnormalities so as to design specific interventions.<sup>5</sup> Our findings confirm that MS is significantly associated with incipient deterioration of kidney function and increased intima-media thickness, but we cannot conclude these markers should be included in MS diagnostic criteria.

We coincide with other authors<sup>6</sup> in our belief that management of these patients requires that we perform studies aimed at clarifying this marker's possible role in prognosis and in determining the most effective treatment.

We are fully aware of NHANES registry data for 2004<sup>3</sup> and cite the aforementioned study.<sup>1</sup> Its authors evaluate advanced stages of kidney disease and the presence of microalbuminuria independently of the glomerular filtration rate. Therefore, in our opinion,

our results complement and confirm these findings. We did not consider the 2005 MESYAS registry<sup>7</sup> because it took account of the glomerular filtration rate in isolation, whereas our study looked at this in combination with the presence of microalbuminuria, in accordance with current American Society of Nephrology recommendations.<sup>8</sup>

Finally, we wish to make it clear that given diabetes and high blood pressure are well-known factors contributing to kidney damage, we excluded patients presenting these in order to study the real value of MS in evaluating subclinical CV disease.

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## Noninvasive Remote Telemonitoring for Ambulatory Patients With Heart Failure and Emergency Department Services

### Telemonitorización no invasiva en pacientes con insuficiencia cardíaca y servicios de urgencias hospitalarios

#### To the Editor,

We have read with interest the article by Domingo et al.<sup>1</sup> on the impact of the noninvasive remote telemonitoring of ambulatory patients with heart failure (HF), which demonstrates a reduction in the number of hospitalizations and hospital days.

Emergency department (ED) staff are aware of the complexity of detecting patients at risk of revisits. In fact, we have developed specific guidelines and consensus statements supported by scientific associations,<sup>2</sup> training and outreach programs,<sup>3</sup> and specific units associated with the ED, such as the observation room or short-stay unit, allowing us to monitor patient progress in the first 24 to 72 h.<sup>4-6</sup> These allow us to stratify risk more effectively and to minimize the risk of revisit, readmission, and short-term mortality.

A growing body of evidence has shown the usefulness of structured multidisciplinary units and of developing noninvasive telemonitoring programs for outpatients with HF and suggests that these strategies may become widespread in the future.<sup>1,7</sup> Thus, to increase our understanding of the profile of patients at short-term risk of readmission for HF treated in the ED, as well as candidates for such strategies, we conducted a multicenter prospective nonintervention study that included all HF patients attended in 19 Spanish EDs for 2 months. We recorded epidemiological variables, cardiovascular risk factors, and associated diseases. The dependent variable was readmission at 30 days. Conventional statistical tests were used for the bivariate analysis, and multivariate logistic regression analysis was performed to control for confounding factors. The study included 2431 patients (mean age 78 ± 10 years). There were 508 (24%) readmissions at 30 days included a history of HF ( $P < .0001$ ), diabetes mellitus ( $P < .0001$ ) and ischemic heart disease ( $P = .093$ ), and patients in whom the precipitating factor was anemia ( $P = .035$ ) or hypertensive crisis ( $P = .038$ ). Multivariate analysis showed that only 3 variables were significantly associated with readmission: a history of HF (odds ratio [OR] = 1.69; 95% confidence interval [CI], 1.09-2.63), anemia (OR = 1.51; 95%CI, 1.02-2.24), and hypertensive crisis as a precipitating factor (OR = 2.24, 95% CI, 1.06-4.72).

It is clear that multiple factors, both clinical and social, are involved in patient revisits to the ED and that the emergency physician should be aware of these factors and be involved in their management.<sup>5</sup> In this regard, patients with an episode of decompensated chronic HF triggered by anemia or hypertensive

crisis are likely to benefit more from intensive early follow-up. In addition, from the point of view of the ED staff, if patients received an early medical visit after discharge or noninvasive remote telemonitoring devices in structured multidisciplinary HF units, as shown by Domingo et al.,<sup>1</sup> then postdischarge monitoring would be improved and probably lead to lower readmission rates and HF-associated mortality.

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