

Protective Overweight in Cardiovascular Disease in the Elderly

Protección del sobrepeso en la enfermedad cardiovascular en ancianos

WOLFRAM DOEHNER, MD, PHD, FESC^{1,2}

One of our most important, most general health concerns is our body weight.

Body weight is not only a window to our bodily state of health; it integrates physical and emotional wellbeing. No surprise, therefore, that body weight is so central in our health considerations, and also no surprise that the widest range of health care professionals, health counselors and coaches have a firm opinion to advise on body weight management. And, let's face it, all of us have a fairly settled opinion on body weight too, on our own weight and weight considerations in general.

What IS a surprise, though, in this context, is that the common considerations on body weight and weight management are surprisingly unidimensional and unidirectional. They are driven, almost dictated, by one general conviction: excessive body weight is detrimental and 'combatting any degree of excessive body weight wherever it is found' is understood as the uniform virtue of health care efforts (1). It is necessary to discuss special conditions where this approach may be wrong and where it may not be beneficial but even cause harm. And it may be worth recognizing that such 'special conditions' are not so special, after all, but in fact apply quite often in our health care system – affecting a wide range of patients.

Any evidence that contradicts the mantra of fighting overweight is perceived with suspicion, and even when the data seem to speak a clear message they are met with disbelief. A typical approach to address such unexpected and partly unexplained findings is to label them as a paradox. The obesity paradox was termed over 20 years ago for the then surprising finding in patients with heart failure that overweight and mild obesity were associated with lower mortality and not, as expected, with increased mortality. Over the last 20 years multiple studies have repeatedly confirmed this insight: excessive body weight is associated not with worse survival but often with better survival in patients with heart failure and any other cardiovascular disease [and also in a range of non-cardiovascular

chronic diseases (2)]. Weight loss, by contrast is always associated with worse survival in patients with heart failure. In fact, the evidence is sufficiently compelling to ensure the inclusion of higher body weight in several risk scores of heart failure as an anti-risk factor, i.e. higher body weight accounts for improved survival, rather than impaired survival (3,4).

In line with previous reports, Favini et al. report in the current issue of this Journal that in an elderly population of patients with acute heart failure a higher body weight (assessed by higher body mass index) was associated with a better prognosis during one year after the acute event (5). They conclude that the obesity paradox was applicable in these patients, regardless of cardiovascular history or ejection fraction. While a majority of the studies on the obesity paradox refer to patients with chronic heart failure, this interesting paper adds to the previous evidence that the survival benefit of overweight applies as well in acutely decompensated patients with heart failure (6,7).

This study confirms once more what has been previously shown in a wide range of clinical studies testing various patient populations with diverse cardiovascular conditions, and using multiple analytical approaches.

Given the consistency of the findings, one wonders why the term obesity paradox is still used in this context. After two decades of accumulating confirmatory reports this finding is neither unexpected nor unexplained (8). which would be needed to qualify for a paradoxical finding. Even more important: a paradoxical finding will never be accepted in the broad medical community as a valid argument for better and differentiating management of body weight. Therefore, the suggestion was made to shift the terminology **from a paradox to a paradigm**, which appreciates the consistent evidence of the protective property of higher body weight in these patients allowing to implement the finding in better and personalized weight recommendations (9).

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Address for reprints: Wolfram Doehner, MD, PhD; Berlin Institute of Health Center for Regenerative Therapies, Charité Universitätsmedizin, Berlin, Germany, Augustenburger Platz 1, 13353 Berlin, Germany; E-mail: wolfram.doehner@charite.de; Tel.: +49 30 450 553 507

¹ BIH Center for Regenerative Therapies (BCRT) and Department of Cardiology (Virchow Klinikum), Charité Universitätsmedizin Berlin, Berlin, Germany.

² Center for Stroke Research Berlin (CSB) Charité Universitätsmedizin Berlin, Berlin, Germany.

The widely adopted current recommendation for weight reduction for each and anybody with excessive body weight will be understood by many patients as a recommendation to reduce caloric intake. Notably, heart failure (8) (and many other diseases) is characterized by a catabolic dominance with anabolic blunting (mediated by inflammation, insulin resistance and growth hormone resistance loss of appetite, sedentary life style and others) (10). Adding starvation to this catabolic condition is predictable to result in an unfavorable metabolic condition that may further augment the catabolic drive and accelerate disease processes.

These findings are not at all contradictory to the view that obesity is a risk factor to account for a wide range of diseases and to be a severe health burden to our society. However, the data on the detrimental effect of overweight refers of course to a primary prevention approach, where the foremost target in healthy subjects is to maintain the good health conditions. By contrast, in patients with existing chronic and often incurable diseases such as heart failure, the aim is to survive with the existing disease in the best possible way. And in such conditions, an added benefit from preserved energy stores (i.e. adipose tissue) and larger muscle bulk (muscle tissue to ensure mobility and functional independence) may prevent or at least delay the development of cachexia and sarcopenia leading to frailty and advanced disease conditions.

Therefore, a differentiated perspective on body weight and weight management should be pursued to allow distinguishing between different approaches (Figure 1). In healthy subjects, primary prevention measures (including preventing obesity) are indeed the best way to support good health. In patients with established chronic disease such as heart failure, however, already prevalent overweight and mild obesity may not be viewed as a risk factor for survival. An unintended weight loss, in turn, should be recognized by the attending physician and health care provider as a sign of accelerated catabolic dominance that indicates advancing disease conditions and a poor prognosis.

The paper by Favini et al. is therefore a valuable addition to the accumulating evidence to obtain a

modern, differentiated approach on body weight and weight management by **appreciating an obesity paradigm rather than a paradox.**

Conflicts of interest

None declared.

(See authors' conflicts of interest forms on the website/ Supplementary material)

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Fig.1. The obesity paradigm in cardiovascular disease: Weight management recommendation should clearly differentiate between the primary prevention in healthy subjects and the secondary outcome prevention in patients with established cardiovascular disease. [adapted from Doehner et al. *Eur Heart J* 2015, [9].

