COMMENTS AND RESPONSES

Comment on: Wehr et al. Low Free Testosterone Levels Are Associated With All-Cause and Cardiovascular Mortality in Postmenopausal Diabetic Women. Diabetes Care 2011;34:1771–1777

We have read with immense interest the recent article by Wehr et al. (1) showing that low free testosterone concentrations in postmenopausal diabetic women are associated with increased all-cause and cardiovascular mortality. We wish to comment on the concentrations of total and free testosterone of the study subjects. The overall mean or median total and free testosterone concentrations were not mentioned. However, according to quartiles based on free testosterone, the mean free testosterone was 0.93 ng/mL (equivalent to 93 ng/dL). The total testosterone at the intersection of second and third quartiles was 2.44 nmol/L (70 ng/dL). Since free testosterone is generally a small fraction (1–5%) of total testosterone, one or both of these concentrations are incorrect. The total and free testosterone concentrations in postmenopausal women are usually less than 20 ng/dL and 0.4 ng/dL, respectively (2,3). This is important for practitioners who will want to put the findings of this article in a clinical perspective. We would like to know which of the quartiles relate to subnormal testosterone concentrations in postmenopausal women.

Most assays for measurement of total testosterone have poor accuracy at the low levels that exist in women. Can the authors comment on the lower limit of detection of the assay used to measure testosterone in their study?

The study subjects were divided into quartiles based on their free testosterone concentrations. There was a higher prevalence of diabetes in the higher quartiles. In the subpopulation of diabetic women, the subjects were also divided into free testosterone quartiles. Since the free testosterone concentration range in each quartile was the same in overall population as well as in women with diabetes, we wonder if the "quartiles" of diabetic women were actually four groups that contained an unequal number of women. We would expect that the groups with higher free testosterone concentrations would have a higher number of women. Can the authors provide the number of women in each diabetic group in Table 2?

The authors had coronary angiography findings on all subjects. The prevalence of coronary artery disease was similar across the quartiles of free testosterone. However, the severity of coronary artery disease is not specified. Was the severity of coronary artery disease different across the quartiles to account for the differences in clinical outcomes?

Information on the above-mentioned issues would help readers interpret the findings of this article more clearly and to put the data in the right perspective.

NITESH D. KUHADIYA, MD, MPH
SANDEEP DHINDSA, MD
PARESH DANDONA, MD

From the Division of Endocrinology and Metabolism, State University of New York at Buffalo, Buffalo, New York.
Corresponding author: Paresh Dandona, pdandona@KaleidaHealth.org.
DOI: 10.2337/dc11-1861
© 2012 by the American Diabetes Association. Readers may use this article as long as the work is properly cited, the use is educational and not for profit, and the work is not altered. See http://creativecommons.org/licenses/by-nc-nd/3.0/ for details.

Acknowledgments—No potential conflicts of interest relevant to this article were reported.

References

1. Wehr E, Pilz S, Boehm BO, Grammer TB, März W, Obermayer-Pietsch B. Low free testosterone levels are associated with all-cause and cardiovascular mortality in postmenopausal diabetic women. Diabetes Care 2011;34:1771–1777
2. Rariy CM, Ratcliffe SJ, Weinstein R, et al. Higher serum free testosterone concentration in older women is associated with greater bone mineral density, lean body mass, and total fat mass: the cardiovascular health study. J Clin Endocrinol Metab 2011; 96:989–996
3. Davison SL, Bell R, Donath S, Montalto JG, Davis SR. Androgen levels in adult females: changes with age, menopause, and oophorectomy. J Clin Endocrinol Metab 2005;90: 3847–3853

Downloaded from http://diabetesjournals.org/care/article-pdf/35/2/e9/611408/e9.pdf by guest on 25 September 2022