Bone mineral density in relation to polycystic ovary syndrome: an insight into irisin and insulin

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Sir,

I read the interesting study by Fawzy *et al*. [1] published in the September–December 2018 issue of the *The Scientific Journal of Al Azhar Medical Faculty, Girls*. The authors assessed bone mineral density (BMD) and determined its relationship with serum irisin and other hormonal parameters in women with polycystic ovary syndrome (PCOS) [1]. They found that serum irisin level, fasting insulin, and homeostatic model assessment of insulin resistance were significantly higher in the PCOS group compared with the control group. They also found that serum irisin level, waist circumference, and fasting serum insulin were the predictors for the *z*-score of the spine in the PCOS group. They concluded that serum irisin level might be considered as a novel biomarker for PCOS diagnosis and that circulating irisin was strongly related to the BMD and bone metabolism [1]. I presume that the following methodological limitation might cast some suspicions on the accuracy of the study results. In the methodology, the authors mentioned that the determination of BMD on lumber spine and left femur was done using dual-energy radiography absorptiometry scan employing MEDIX DR dual-energy radiography absorptiometry scan [1]. However, they did not address which BMD reference values (BMDRVs) were employed to interpret BMD readings. It is explicit that BMDRVs are controlled by various determinants, namely, age, sex, weight, ethnicity, pubertal stage, and socioeconomic standard [2,3]. Accordingly, normative BMDRVs have been constructed for certain female populations to be employed in the researches and clinical field [4]. Egypt is a pioneer in constructing BMDRVs for women population as having a national standard gives a better idea of the BMD status than using a foreign population reference standard. [5]. I wonder why the authors did not refer to the national BMDRVs in their study. I presume that employing them could better delineate BMD profile and its correlation with various hormonal parameters in the Egyptian women with PCOS.

Letter from the authors

We appreciate your interest in our research. We agree with you that bone mineral density is definitely influenced by ethnicity and race and we believe that using national rather than international reference values would add validity to our results. However, the reference values we used were those of Caucasian population which have been very close to the Egyptian values. Your view will be definitely considered in future research.

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Conflicts of interest

There are no conflicts of interest.

References

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