Calculation of the reference bone mineral density values in North Indian population using phantomless quantitative computed tomography

Sir,

I refer to the distinguished study by Mistry *et al.*[1] on the calculation of the reference bone mineral density (BMD) values in North Indian population using phantomless quantitative computed tomography. The authors constructed BMD reference values that were age and gender specific. They found that males showed a linear relationship between age and BMD with continuous bone loss after the age of 25 years, while females demonstrated a more complex relationship between age and BMD with accelerated bone loss in perimenopausal age group.[1] I presume that such results ought to be cautiously taken. Apart from few limitations addressed by the authors, I presume that the following methodological limitation might further cast some suspicions on the precision of the study results. It is obvious that apart from age and gender, BMD reference values are additionally controlled by the following two determinants, namely ethnicity and socioeconomic standard (SES). On the one hand, it has been found that in multiethnic populations, the race-specific lower limit of normal BMD values could create a new classification method of low BMD, which might mitigate some of the T-score limitations in minority populations.[2] On the other hand, it has been reported that people of lower SES tended to have lower BMD than those from a higher SES.[3] To my knowledge, population in India is heterogeneous, and it is an amazing amalgamation of various ethnicities and SES. I presume that the authors did not consider the ethnicity and SES of the studied cohort. Hence, I presume that designing age, gender, ethnicity, and SES-specific normative BMD reference curves could better predict the real BMD of the diverse Indian population. Despite the above-mentioned limitations, BMD reference percentiles constructed by the authors have useful implications in the clinical field and researches.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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How to cite this article: Al-Mendalawi MD. Calculation of the reference bone mineral density values in North Indian population using phantomless quantitative computed tomography. J Orthop Allied Sci 2018;6:96.