

Validation of cross-sectional studies with long-term longitudinal studies

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According to Kauppi et al. [1], women with three or more births have a significant lower risk of hip fracture when compared with nulliparous women [relative risk (RR), 0.50; (95% confidence interval (CI), 0.37–0.76)]. These results coincide with our findings from a cross-sectional study in a large postmenopausal population in Barranquilla, Colombia where we found a similar lower risk of fracture in multiparous women (three or more births vs. nulliparous) [RR, 0.49 (95% CI, 0.26–0.84) $p < 0.006$] [2]. The study by Kauppi et al. confirms the results of our cross-sectional study published 10 years ago. In addition, considering the similarities of these studies, some of the limitations of the study by Kauppi et al. could be answered with our results and without the need of another long-term longitudinal study. For example, in our study, we found an increase in the bone mineral density and in the total bone and calcium content in all skeletal areas with each delivery which could be considered a “gestational bone mass peak” analogous to the bone mass peak observed during puberty [3]. Finally, to address another of their limitations, we have also found that

lactation up to 48 months does not have a long-term adverse effect in bone health [4]. By comparing the results of the studies above, we confirm the importance of well-designed cross-sectional studies as an early and reliable source of information that could help in designing disease prevention programs while gaining 10 years in the process.

References

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