Hysterectomy and the risk of osteoporosis

TO THE EDITORS: I read with interest the study by Choi et al. regarding the association of subsequent development of osteoporosis with previous hysterectomy. The completeness and universality of South Korea’s National Healthcare database is enviable. However, their singular focus on the possible loss of ovarian reserve as the explanation for this association does seem somewhat narrow. Although this is indeed a possible explanation, one should be somewhat circumspect about a finding of a modest increase in adjusted hazard ratios based on what is essentially an administrative claims database.

I believe that physical activity is a potential confounder for which they were unable to control. Women undergo hysterectomy for a reason (hopefully). A diagnosis such as pelvic pain, uterovaginal prolapse (with or without incontinence), or menorrhagia and discomfort because of fibroid tumors may be associated with decreased activity level and decreased ability to exercise before the hysterectomy, combined with a period of recovery time after the hysterectomy when activity levels are voluntarily curtailed based on typical medical recommendations. This could have resulted in a loss of bone mineral density.

The possibility that lost ovarian reserve is the causal factor is further brought into question by the similar adjusted risk difference found when we compare women who had a bilateral salpingo-oophorectomy at the time of their hysterectomy with those who did not. Although the raw difference in incidence is approximately 10%, after adjustment for ischemic heart disease, stroke, and depression (each of which might plausibly be associated with decreased physical activity), the 95% confidence intervals of the adjusted hazard ratios largely overlap. If loss of sex-steroids is the cause, would not one expect a much larger difference in the independent risk of hysterectomy that included bilateral salpingo-oophorectomy?

In addition, decreased bone mineral density is only an intermediate outcome. Was there a difference in the incidence of fracture between the 2 groups?

I thank the authors for their important contribution.

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REFERENCE

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