Letter to the Editors

The risk of pelvic organ prolapse in total hysterectomy and subtotal hysterectomy

Myounghwan Kim, M.D., Ph.D.¹, Jin-Sung Yuk, M.D., Ph.D.¹*

Department of Obstetrics and Gynecology, Sanggye Paik Hospital, School of Medicine, Inje University, Seoul, Republic of Korea¹

*Corresponding author: Jin-Sung Yuk, MD, PhD

Department of Obstetrics and Gynecology, Sanggye Paik Hospital, School of Medicine, Inje University, 1342, Dongil-ro, Nowon-gu, Seoul, Republic of Korea

E-mail: dryjs01@gmail.com

Tel: 82-10-2928-1273, Fax: 82-504-274-1273

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To the Editors: Husby et al. investigated the risk of pelvic organ prolapse (POP) in women who underwent hysterectomy using the Danish National Patient Registry. The authors demonstrated that the risk of POP surgery was higher in women who had undergone hysterectomy than in those who still had their uterus. To eliminate bias in their analysis, the researchers utilized a 1:5 matching method based on age and calendar year. Despite these attempts, there are several issues with the study.

First, there is a problem with the composition of the subgroups. The authors argued that hysterectomy, excluding vaginal hysterectomy, was associated with POP (adjusted hazard ratio (aHR) 1.5, 95% confidence interval (CI) 1.0-2.4). However, excluding laparoscopic-assisted vaginal hysterectomy (LAVH) and vaginal hysterectomy from the subgroup analysis seems more reasonable. The authors also explained that vaginal hysterectomy is difficult to perform when the vagina is narrow, and there is no descent of the uterus. This is a feature shared in part not only with vaginal hysterectomy but also with LAVH. Additionally, the authors reported that total hysterectomy (aHR 1.5, 95% CI 0.9-2.4) and subtotal hysterectomy (aHR 1.5, 95% CI 0.6-3.5) were not associated with POP. Total hysterectomy and subtotal hysterectomy account for 95% of all hysterectomy cases. Therefore, it is overstated to claim that all hysterectomies are POP-related. Rather, it appears logical to claim that total hysterectomy and subtotal hysterectomy are unrelated to POP.

Second, there is a problem with target group selection. If POP was present in a patient before study selection, they should have been excluded from the target group or adjusted in the analysis. POP patients who had not undergone surgery were not excluded from the study group. For example, if a woman with mild uterine prolapse underwent a hysterectomy without colpopexy, this woman was assigned to the hysterectomy group. Therefore, among the finally
selected women, women with POP before selection should have been excluded regardless of whether they had undergone POP surgery.

Third, another bias that is present in the study was omitting pessary use from the primary outcome. Pessaries are so widely utilized that they are found in 19% of all POP treatments.\textsuperscript{3} In contrast, short vaginal length and previous pelvic surgery are risk factors for pessary failure.\textsuperscript{4} Because women who have undergone hysterectomy are more likely to experience pessary failure, they are more likely to need POP surgery. It is the same concept that a tubal pregnancy with a fetal heartbeat has a higher surgical risk than a tubal pregnancy without a fetal heartbeat. The reason is that a woman with a tubal pregnancy with a fetal heartbeat is more likely to experience methotrexate failure. Therefore, pessary use should be included in the primary outcome.

We respect the exciting work of the authors. Nonetheless, the conclusion of this study suggested that the POP risk associated with total and subtotal hysterectomy might be overestimated. Therefore, we believe that adjusting their findings or rephrasing their conclusions is necessary to improve the study.

