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Female Tubal Sterilization: The Time Has Come to Routinely Consider Removal

To the Editor:

We appreciate the commentary recently published by Creinin and Zite,¹ urging that complete salpingectomy be considered as a tool for ovarian cancer prevention. However, we urge caution in rapidly adopting this procedure, not only for routine universal use at the time of hysterectomy but also in other clinical contexts such as postpartum and interval sterilization. Although the authors cite complete salpingectomy as the definitive standard for sterilization, this conclusion is not automatically supported by extant literature. Robust data that actually support the efficacy of this procedure are sparse at best. For example, fimbriectomy as described by Kroener² in 1969 has been largely abandoned owing to evidence of failure rates of 2.4–2.6% over 4 years, largely due to tuboperitoneal fistula formation and subsequent pregnancy.^{3,4}

Although it might be easy to conclude that the complications observed with Kroener fimbriectomy can be easily rectified with more extensive salpingectomy, the extent of salpingectomy truly required to optimally reduce ovarian cancer risk remains unknown. Similarly, randomized prospective trials quantifying the effectiveness of total salpingectomy for the purposes of sterilization are

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lacking. Perhaps most importantly, the efficacy of salpingectomy for ovarian cancer prevention remains clinically undemonstrated. For example, the study cited by the authors as supporting the efficacy of excisional procedures for ovarian cancer prevention involves only a small number of women, fails to examine salpingectomy as an independent variable, and has yet to be published in the peer-reviewed literature (Lessard-Anderson CMR SSJ, Weaver A, Bakkum-Gamez J, Dowdy S, Cliby B. The impact of tubal sterilization techniques on the risk of serous ovarian and primary peritoneal carcinoma: a Rochester Epidemiology Project (REP) study. Scientific Plenary, Society for Gynecologic Oncology Annual Meeting; 2013).

Additional questions include the unknown effect of total salpingectomy on ovarian function, the safety of postpartum salpingectomy through the traditional infraumbilical mini laparotomy after vaginal delivery, and the cost-effectiveness of this procedure when used as a population-based strategy for ovarian cancer prevention. For example, it may be possible to avoid significant postpartum morbidity by avoiding hypertrophied vessels and removing slightly less tube with equally as impressive outcomes. Histologic evaluation of the postpartum tube also will be important to avoid confusion regarding potential issues with proliferative lesions of unknown significance that might be encountered for women who undergo salpingectomy in the postpartum window (Hsieh GL, Antony K, Masand R, Anderson M. A prospective feasibility study of postpartum distal salpingectomy. Poster, American College of Obstetricians and Gynecologists Annual Clinical & Scientific Meeting; 2014).

Despite these limitations, we agree that excisional procedures have enormous potential to reduce the incidence of a lethal disease for which there are no effective screening tools. However, we would advocate for a more cautious introduction of this procedure into medical practice. Ultimately, its adoption will require that we arm ourselves with sufficient evidence and knowledge that our patients can be counseled accurately. At its core, this will require

carefully defining the extent of excisional procedure necessary and prospectively evaluating its risks and benefits.

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In Reply:

Although we appreciate the comments of Drs. Hsieh and Anderson, the ever-increasing literature on the two topics we discussed—sterilization failure rates and ovarian cancer origin in the Fallopian tube—is quite consistent. Importantly, the commentary focuses on the fact that we need to be offering women a “better” sterilization method simply because it works better, not just because it might also prevent ovarian cancer.

Ovarian cancer is a horrible but relatively rare disease. In 2010, approximately 20,000 women in the United States were diagnosed and 14,500 died from this gynecologic malignancy (www.cdc.gov/cancer/ovarian/statistics), whereas more than 640,000 women elected to undergo a female sterilization procedure.¹ Clearly female sterilization is a much more common event than being diagnosed with tubal or



ovarian cancer. It would be wonderful if we could offer all women with ovarian cancer a 100% cure rate, but unfortunately we cannot even come close. However, we can offer all women who request sterilization a much better success rate than the approximately 950/1,000 procedures that are afforded to them with the most common methods currently used.²

We agree that, as with any change in practice, we need to proceed with caution and fully evaluate the safety and cost-effectiveness; however, waiting the decades it would take to prove any benefit in cancer protection would put more women at risk for sterilization failure and future ectopic preg-

nancy than we could ever hope to save with a decrease in cancer cases. The cancer issue has garnered more attention, but we argue that pregnancy prevention should have been enough to push the pendulum toward tubal removal instead of merely occlusion. When surgeons operate for appendicitis, they remove the entire appendix so the patient has negligible to no risk of a future episode; we should be offering women definitive treatment in our surgical management for female sterilization as well.

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Letters to the Editor

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