Diagnostic Accuracy of Transvaginal Sonography in Infertile Patients with Endometrial Polyps

To the Editor

We are interested the article by Niknejadi et al. (1) highly scientific and provocative however there seem to be a lack of clarity on some of the methodological issues;

1. In the materials and methods section, it was mentioned that: "in cases that had normal endometrial findings on transvaginal sonography (TVS), a hysteroscopy was not scheduled due to ethical considerations" whereas in the results, a total of 466 cases with negative TVS were presented. It is not mentioned how these patients were found. If they have other indications for hysteroscopy, it may add bias to your research which may affect the results (verification bias). The bias would be present since both the TVS positive and negative patients would come from different patient populations that have different indications as a result of their various medical conditions. For example, most likely the TVS negative patients in this study came from patients who presented with *in vitro* fertilization (IVF) failure, intrauterine insemination (IUI) failure and abnormalities seen in clinical exams, to name a few. The TVS positive cases would beare the people diagnosed during routine TVS for infertility evaluation. Although your research is retrospective, it would be better to consider such differences between subjects (2-6).

2. Considering that TVS negative patients do not routinely undergoto hysteroscopies; therefore one can conclude that TVS is a highly sensitive test, thus positive patients will not be missed. Laparoscopy is a highly specific test needed solely for confirming the diagnosed problem and can filter out healthy patients (2). It seems that in your report, the sensitivity of TVS is not very high. On the other hand, if we assume that there are some degrees of verification bias in your study, the real sensitivity even will be lower than calculated.

Mona Oudi, B.Sc.
Reza Omani Samani, M.D.

Department of Epidemiology and Reproductive Health, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran
Email: monaoudi@royaninstitute.org

References

1. Niknejadi M, Ahmadi F, Zafarani F, Khalili M, Ghaderi F, Rashidi Z. Diagnostic accuracy of transvaginal sonography in infertile patients with endometrial polyps. International Journal of Fertility and Sterillity (IJFS). 2010; 3 (4): 157-160.
2. Berek JS. Berek & Novak's Gynecology. 14th ed. Philadelphia: Lippincott Williams & Wilkins; 2007; 787.
3. Ringham BM, Alonzo TA, Grunwald GK, Glueck H. Estimates of sensitivity and specificity can be biased when reporting the results of the second test in a screening trial conducted in series. BMC Med Res Methodol. 2010; 10:3.
4. Buzoianu M, Kadane JB. Adjusting for verification bias in diagnostic test evaluation: a Bayesian approach. Stat Med. 2008; 27(13): 2453-2473.
5. Zhou XH.Correcting for verification bias in studies of a diagnostic test's accuracy. Stat Methods Med Res. 1998; 7(4): 337-353
6. Cronin AM, Vickers AJ. Statistical methods to correct for verification bias in diagnostic studies are inadequate when there are few false negatives: a simulation study. BMC Med Res Methodol. 2008; 8: 75.