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Effect of Urinalysis on the Role of Pelvic Examination in Patients With Possible Genitourinary Infection

To the Editor:

It was a pleasure to read the piece by Farrukh et al[1] on the utility of pelvic examinations in diagnosing sexually transmitted infections. Some "traditional" providers may find the uselessness of the examination to be blasphemous, but there is a plethora of evidence showing lack of benefit for various maneuvers taught in traditional medical school education; http://www.getthediagnosis.org has sensitivities and specificities listed for various tests, and their predictive values can be humbling[2] (it may also take a certain level of humility for said providers to read data on a Web site as opposed to on paper).

Farrukh et al obtained urine samples to test for gonorrhea and chlamydia. It would be interesting to see what the urinalyses for these patients showed. In one study, 95 percent of patients with sexually transmitted infections have a urinalysis result that is positive for either pyuria or leukocyte esterase (personal communication, M. Hecker, MetroHealth, January 2018). It is unknown what the predictive value of a urinalysis is for sexually transmitted infections, but given the aforementioned statistic and the overall prevalence of sexually transmitted infections in the emergency department,[3] it is reasonable to assume that a patient with a negative urinalysis result is unlikely to have a sexually transmitted infection. It would be interesting to see what the utility (or lack thereof) of the pelvic examination is in this subset of patients and, conversely, the value of the examination in patients with a positive urinalysis result. We know that patients with a positive urinalysis result are frequently overdiagnosed with urinary tract infections and underdiagnosed with sexually transmitted infections.[4] It is possible that for patients with a positive urinalysis result, a pelvic examination would show positive effect (for example, if many of the falsely positive examination results in the study by Farrukh et al were for patients with negative urinalysis results). Although this is unlikely, it is an important consideration, especially given that the authors' article will certainly decrease the amount of pelvic examinations that providers perform. Although this per se may not affect the rates of empiric treatment for pelvic inflammatory disease, it may exacerbate overdiagnosis of urinary tract infection; in particular, for patients with a positive urinalysis result.

Murtaza Akhter, MD
Department of Emergency Medicine
University of Arizona College of Medicine–Phoenix
Maricopa Medical Center
Phoenix, AZ

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In reply:

We thank Dr. Akhter for interest in and comments on our article.

In Table 1, we describe the clinical information for patients with and without sexually transmitted infections. There were no significant differences between the 2 groups in regard to who had positive findings on point-of-care urinalysis for nitrites and leukocyte esterase. We did not have available point-of-care microscopy assessment for pyuria in our emergency department, nor did we follow each test with a urine culture.

There are studies that evaluate the presence of pyuria and specifically sterile pyuria in women who are known to have sexually transmitted diseases such as chlamydia, gonorrhea, or trichomonas. In a large retrospective study that included 1,052 women with sexually transmitted infection, Shipman et al[1] found 62% had no pyuria, 28% had sterile pyuria, and 10% had nonsterile pyuria. A smaller study by Shapiro et al[2] examined factors associated with sexually transmitted infection in women and found that leukocyte esterase, pyuria, or nitrites revealed by urinalysis did not predict results of sexually transmitted infection tests.

The evidence shows there is a high prevalence of urinalysis findings in women with sexually transmitted infections, but it is not something we can use to predict such infections because the majority of women with sexually transmitted disease have normal urinalysis results. The initial analysis from our study found no significant additional information from the point-of-care urinalysis, but the pelvic examination in combination with point-of-care urinalysis findings might help direct physicians toward a more accurate diagnosis. A strategy to improve medical care includes the development of a clinical decisionmaking rule for cervicitis and pelvic inflammatory disease. A potential rule could involve elements from the history of presentation, the physical examination (including a pelvic examination), ultrasonographic findings, and point-of-care testing (for urinalysis and sexually transmitted infection).[3]

Cena Tejani, MD
Adam B. Sivitz, MD
Department of Emergency Medicine
Children's Hospital of New Jersey at Newark Beth Israel
Newark, NJ

Shamyla Farrukh, MD
Department of Emergency Medicine
Staten Island University Hospital
Staten Island, NY

Kavita Patel, MD
Department of Emergency Medicine
NYU Langone Health

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Additive Value of Pelvic Examinations to History

To the Editor:

In the study of sexually transmitted infections by Farrukh et al,[1] the presented evidence is insufficient to justify the authors' call to abandon the current Centers for Disease Control and Prevention (CDC) pelvic examination criteria for pelvic inflammatory disease diagnosis.

First, the study is biased by combining 2 clinically diverse outcomes (cervicitis and pelvic inflammatory disease) into a single composite outcome merely because