Antibiotics Don’t Clear Plasma Cell Endometritis

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BOSTON — Antimicrobial therapy does not clear plasma cell endometritis in many women who have or are at risk for asymptomatic gonorrhea, chlamydia, or bacterial vaginosis, Dr. Harold C. Wiesenfeld reported at the annual meeting of the Infectious Diseases Society for Obstetrics and Gynecology.

Histologic endometritis—defined as the presence of at least five neutrophils in the superficial endometrial epithelium per 400× field and at least one plasma cell per 120× field of endometrial tissue—is common in women with lower genital tract infection who do not have signs or symptoms of acute pelvic inflammatory disease (PID), but there are conflicting data regarding whether treatment for the histologic diagnosis is warranted, said Dr. Wiesenfeld of the University of Pittsburgh.

To determine the effect of antibiotic therapy on the clearance of plasma cell endometritis, Dr. Wiesenfeld and his colleagues conducted a nested analysis of women who were enrolled in a larger observational cohort investigation of subclinical PID and infertility. Women between the ages of 15 and 30 years were eligible for study enrollment if they had clinical evidence of mucopurulent cervicitis (purulent cervical discharge), if they were recently diagnosed with gonorrhea or chlamydia and were not yet treated, if they were diagnosed with bacterial vaginosis, or if they reported sexual contact with a male diagnosed with gonorrhea, chlamydia, or nongonococcal urethritis. Women with signs and symptoms of acute PID were excluded.

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Of 382 women enrolled in the larger study with adequate initial endometrial samples, 61 had plasma cell endometritis on enrollment. ‘Of these 61 women, 40 had a second evaluable endometrial biopsy specimen and were included in our analysis,’ he said. The mean age of the nested cohort was 24 years, and 77% of the women were African American.

Based on the result of the second endometrial biopsy, ‘our key finding was that 16 of these 40 women—40% of them—had persistent plasma cell endometritis at 12 weeks following antibiotic therapy,’ Dr. Wiesenfeld said. ‘We compared those women who cleared the endometritis with antibiotic therapy and those who did not and found no statistical differences in age, race, insurance, previous pregnancy status, smoking, douching prior to enrollment or during the trial, or interim antibiotic use since the trial.’ Additionally, infection status at time of enrollment did not impact clearance.

‘There was no difference [in postantibiotic clearance] among those women who had gonorrhea, chlamydia, or both organisms or bacterial vaginosis or trichomoniasis,’ Dr. Wiesenfeld noted. ‘Looking at endometrial microbiology, we did not find any correlation between upper genital tract microbiology and presence of endometritis at 12 weeks,’ he said, nor did they observe any differences associated with degree of plasma cell infiltrates on initial biopsy or with antibiotic regimen.

‘The fact that plasma cell endometritis persisted in 40% of these women following antibiotic therapy with no identifiable variables that predicted failure raises questions about the importance of identifying plasma cells in the endometrium,’ Dr. Wiesenfeld stated. Before therapeutic decisions can be made based on plasma cell endometritis, ‘we really need to define the role of plasma cells in the endometrium,’ he said.