Infectious Diseases in Obstetrics and Gynecology 7:275 (1999)

Author's Response

This letter is in response to Dr. Donders' comments on the article, "Gram stain method shows better sensitivity than clinical criteria for detection of bacterial vaginosis in surveillance of pregnant, low-income women in a clinical setting."[1] Dr. Donders' statement that we had claimed that *Gardnerella vaginalis* can be identified by Gram stain is an inaccurate interpretation of our paper. Gram stain can be used for both a qualitative and semiquantitative assessment of the reduction in the normal *Lactobacillus* microbial content of the vagina and its replacement by a heterogeneous mixture of anaerobic bacteria, *Mycoplasma* species, and *G. vaginalis*. The method employed to evaluate the Gram stains was based on a general overview of the vaginal microflora seen on the smears and not merely the presence of *G. vaginalis*.

While it may be true that the article presents no data on pregnancy outcome, the sole purpose of the study was to compare the Gram stain method with the clinical criteria in the diagnosis of bacterial vaginosis. Our examination of the impact of bacterial vaginosis on pregnancy outcome is ongoing; we are currently analyzing outcome data on the original subjects and intend to continue enrolling symptomatic pregnant women to expand our evaluation of this important issue. Recent studies have shown that early identification of bacterial vaginosis and appropriate antibiotic intervention can reduce the likelihood of adverse pregnancy outcome.[2,3]

We would like to underscore Dr. Donders' concerns regarding the interpretive expertise needed for assessment of vaginal discharge. Of the four clinical observations used for evaluation of vaginal secretions, the pH measurement is the only component with an objective and highly reproducible endpoint. Wet-mount microscopy in practice is hindered by considerable subjectivity and interobserver variability. A true phase-contrast microscope has an optical system that may be superior to conventional brightfield microscopy conditions for reviewing wet-mount specimens. However, the majority of outpatient facilities do not have phase-contrast equipment (as used by the research laboratories cited in his letter), and wet-mount examinations are performed by using standard microscopes that are suboptimal for identifying the microbial diversity which characterizes bacterial vaginosis.

Culture of vaginal secretions in our patients did not include specialized media and incubation conditions for isolating *Mycoplasma* and the anaerobic species. Cultures were reported as positive only if *G. vaginalis* was isolated in moderate to heavy growth. While cost considerations and test availability did curtail our laboratory investigation, these same logistic and fiscal issues are typical constraints in all outpatient obstetric practice.

The concern that since the study population was mainly low-income clinic patients and that the "burden of inviting these women back for treatment would be straining and disappointing" is unfounded. Our patients were informed of the risks associated with bacterial vaginosis and were cooperative and compliant in follow-up evaluation and treatment. The simplicity, reproducibility, and low cost of Gram stain are all practical advantages for its use in the diagnosis of bacterial vaginosis in pregnancy.

Maria Teresa Tam, MD

References

1. Tam MT, Yungbluth M, Myles T. Gram stain method shows better sensitivity than clinical criteria for detection of bacterial vaginosis in surveillance of pregnant, low-income women in a clinical setting". Infect Dis Obstet Gynecol 1998;6:204–208.
2. Hauth JC, Goldenberg RL, Andrews WW, DuBard MD, Copper RL. Reduced incidence of preterm delivery with metronidazole and erythromycin in women with bacterial vaginosis N Engl J Med 1995;333:1732–1736.
3. Mcdonald HM., O'Loughlin JA. Vigneswaran R, et al. Impact of metronidazole therapy on preterm birth in women with bacterial vaginosis flora (*Gardnerella vaginalis*): a randomized, placebo-controlled trial. Br. J. Obstet. Gynaecol 1997;104; 1391–1397.