

EXAMINING the Evidence

Optimal treatment for BV; antepartum pelvic floor exercises and incontinence

THE QUESTION: Is intravaginal clindamycin more effective than oral metronidazole for the treatment of bacterial vaginosis (BV)?

PAST STUDIES Metronidazole is the standard treatment for BV. However, other trials have shown that regimens of intravaginal clindamycin were as effective as oral metronidazole for treating BV.

THIS STUDY Women with BV received either 100 mg of intravaginal clindamycin for 3 consecutive days plus placebo capsules orally for 7 days or 500 mg of metronidazole twice daily orally for 7 days along with intravaginal placebo ovules for 3 days. Subjects were excluded if they were pregnant or breastfeeding, had received systemic or vaginal antimicrobial therapy 2 weeks prior to the study, or if they were taking antibiotics. Also, women who had gonorrhea, candidiasis, chlamydia, or genital herpes could not participate in the trial.

Of the 399 women enrolled, 233 were evaluated for treatment efficacy. Of those, 77 of 113 patients were cured of BV with clindamycin and 80 of 120 women were cured with metronidazole. Side effects of nausea and unpleasant taste were reported more frequently in the metronidazole treatment group. Clinical outcome was determined by vaginal fluid amine odor and clue cells.

While there was no significant difference in the effectiveness of both regimens, the researchers observed that clindamycin had fewer systemic effects because of its shorter dosage regimen (3 days as opposed to 7 days of metronidazole). Therefore, clindamycin was better tolerated among participants.

FIND THIS STUDY August 2000 issue of *Obstetrics and Gynecology*; abstract online at www.acog.com.

WHO MAY BE AFFECTED BY THESE FINDINGS? Women who have BV.

EXPERT COMMENTARY BV is present in 10% to 30% of pregnant women and 12% to 61% of women with sexually transmitted diseases. While BV is perceived as a mild medical problem, often without symptoms or signs of vaginal inflammation, it could lead to

postoperative infection after hysterectomy, postpartum endometritis, and preterm labor if left untreated. Therefore, fast and effective treatment is imperative.

Unfortunately, the researchers' findings that the clindamycin was as effective as and better tolerated than the metronidazole are marred by several methodological errors. First, the resolution of the amine odor and clue cells is a poor outcome measure. While the patients may no longer have a malodorous vaginal discharge, this does not mean that a healthy, *Lactobacillus*-dominant, vaginal microflora has been established. In fact, if the pH level has not been

restored to less than 4.5, there is a possibility that the vaginal microflora will be plagued by a gram-positive bacterium, including *Streptococcus agalactia* or *Enterococcus faecalis*, or a gram-negative bacterium such as *Escherichia coli*. Neither agent was particularly satisfactory in restoring a *Lactobacillus*-dominant microflora. Furthermore, the cure rates were not impressive, as they did not reach 70%.

Moreover, comparing the systemic absorption of clindamycin administered vaginally to metronidazole taken orally is like comparing apples to oranges. Legitimate results will not come from measuring the adverse effects of 2 different antimicrobial agents administered by different routes. In fact, it is well known that many antibiotics taken orally cause the patient to experience nausea, often resulting in discontinuation of the medication.

THE BOTTOM LINE BV continues to be a poorly understood condition. Knowledge of microbial interactions will make it easier to restore an altered vaginal microflora to a healthy one. In the meantime, administer 500 mg of metronidazole orally 3 times a day for 7 days.

At present, women treated for BV should be checked for the following: whether the pH level has returned to a normal range of 3.8 to 4.2 and if *Lactobacillus* has regained dominance. Failure to achieve these 2 goals means that the treatment was not successful.

Sebastian Faro, MD, PhD

Clinical Professor

Department of OBG and Reproductive Sciences
University of Texas–Houston Health Science Center
Houston, Tex

continued on page 16

THE QUESTION: Can antepartum pelvic-floor exercises prevent stress incontinence in at-risk primigravidas with bladder-neck mobility?

PAST STUDIES There is extensive evidence suggesting that immediate postpartum pelvic-floor exercises can reduce the incidence of incontinence. However, little research has been conducted to determine whether antepartum pelvic-floor exercises were effective in reducing postpartum stress incontinence in at-risk primigravidas.

THIS STUDY Primigravidas at 20 weeks' gestation with bladder-neck mobility were selected to participate in supervised pelvic-floor exercises with a physiotherapist until they delivered. The exercises included 3 repetitions of 8 contractions each held for 6 seconds, with 2-minute rests between repetitions. At 34 weeks' gestation, the number of contractions per repetition was increased to 12.

Of the 230 women observed, 120 took part in the pelvic-floor exercises and 110 were observed in the control group. Participants in the control group performed pelvic-floor exercises as instructed by a physician, but did so unsupervised.

Those patients performing pelvic-floor exercises for 28 days or more were less likely to have postpartum stress incontinence compared with the control group (19.2% and 32.7%, respectively). There was no change in bladder-neck mobility and no difference in pelvic-floor strength between groups after exercise. However, gravidas who developed postpartum stress incontinence had poorer perineometry scores than those who were continent.

Based on these findings, the researchers support the view that supervised antepartum pelvic-floor exercises are effective in reducing the risk of postpartum stress incontinence.

FIND THIS STUDY January 2002 issue of the *British Journal of Obstetrics and Gynaecology*; abstract online at www.bjog-elsevier.com.

WHO MAY BE AFFECTED BY THESE FINDINGS? Primigravidas at risk for postpartum stress incontinence in particular, and all pregnant women in general.

EXPERT COMMENTARY It is difficult to estimate the number of women affected by stress incontinence and other pelvic-floor disorders such as pelvic-organ prolapse and fecal incontinence.¹ Several markers indicate that a large segment of the adult female population is affected. Olsen and colleagues estimated the lifetime risk of undergoing surgery for pelvic-floor disorders in the United States was 11.1%.² In addition, Korn et al noted that in the early 1990s, more than 100,000 operations were performed annually for

stress incontinence in this country.³ These statistics indicate that preventive measures are in order.

The role that pregnancy and route of delivery play in the development of postpartum stress incontinence is not clear. Current evidence implicates pregnancy as a major risk factor and suggests that vaginal delivery may play a contributing role.⁴ Further, there is evidence to support the hypothesis that injuries associated with pregnancy may cause stress incontinence and that immediate rehabilitation of the pelvic-floor muscles may reduce this morbidity.⁵ In this study, the researchers have taken the next logical step to answer the following: If the muscles of the pelvic floor are optimally trained prior to delivery, will they be less likely to sustain injury? The results are encouraging.

Women who underwent coached pelvic-floor muscle exercises experienced postpartum stress incontinence in about 20% of cases, whereas those without coaching experienced incontinence in one-third of cases. This is even more impressive given the heterogeneity of compliance within the coached group: Approximately 39% of those supervised did not consistently perform the exercises. Further, the relative risk of stress incontinence was 0.59 favoring the control group.

However, objective outcome measures of pad test, pelvic-muscle strength, and bladder-neck mobility showed no difference in either group.

THE BOTTOM LINE It is difficult to design trials for pelvic-floor exercise, particularly in conjunction with pregnancy and delivery. While the authors of this study did a commendable job, additional data is still needed. In the meantime—because of this research—it is appropriate to recommend antepartum pelvic-floor exercises for all women, and to consider coached exercises for gravidas who are at highest risk for postpartum stress incontinence. Unfortunately, surgical interventions for pelvic-floor disorders are imperfect, so we should undertake every effort to optimize preventive measures.

Karl Luber, MD

Director, Section of Female Pelvic
Medicine and Reconstructive Surgery
Kaiser Permanente
San Diego, Calif

REFERENCES

1. Mallett V, Bump RC. The epidemiology of pelvic floor dysfunction. *Curr Opin Obstet Gynecol*. 1994;6(4):308-312.
2. Olsen AL, et al. Epidemiology of surgically managed pelvic organ prolapse and urinary incontinence. *Obstet Gynecol*. 1997;89:896-900.
3. Korn A, Learman LA. Operations for stress incontinence in the United States, 1988-1992. *Urology*. 1996;48(4):609-612.
4. Mant J, Painter R, Vessey M. Epidemiology of genital prolapse: observations from the Oxford Family Planning Association Study. *Br J Obstet Gynaecol*. 1997;104(5):579-585.
5. Morkved S, Bo K. The effect of postpartum pelvic floor muscle training in prevention and treating of urinary incontinence: a 1-year follow-up. *Br J Obstet Gynaecol*. 2000;107:1022-1028.

