

Don't Ignore Asymptomatic Trichomoniasis

Higher GM-CSF concentrations seen with such infections in pregnancy and indicate inflammatory response.

BY SHARON WORCESTER
Southeast Bureau

CHARLESTON, S.C. — Asymptomatic trichomoniasis during pregnancy appears to elicit a maternal inflammatory response, and should not be ignored, Brenna L. Anderson, M.D., said during the annual meeting of the Infectious Diseases Society for Obstetrics and Gynecology.

In a nested case-control study of 199 serum samples from women enrolled in the Vaginal Infections and Prematurity Study between 23 and 26 weeks' gestation and followed until delivery, median concentrations of granulocyte-macrophage colony-stimulating factor (GM-CSF) were significantly higher in samples from women with asymptomatic trichomoniasis than in those without the infection, indicating a systemic inflammatory response.

Also, those with trichomoniasis were



significantly more likely to have a GM-CSF concentration in the highest quartile.

The association between infection and GM-CSF concentrations persisted even after the investigators controlled for center, tobacco use, and bacterial vaginosis, said Dr. Anderson of the University of Pittsburgh.

She noted that both the case and control samples were matched for race and sexually transmitted disease coinfection.

The two groups did not differ in regard to maternal age, gestational age at delivery, and rate of chlamydia or gonorrhea, she reported.

The inflammatory response appears to be exacerbated by coinfection with other sexually transmitted infections. There was a significant test for trend in those coinfecting with gonorrhea or chlamydia, compared with those infected with only trichomoniasis and those with no sexually transmitted infection, she said.

The inflammatory response may be exacerbated by coinfection with another STD.

DR. ANDERSON

In addition to GM-CSF, Dr. Anderson compared concentrations of five other cytokines, interleukin- β (IL- β), IL-6, IL-8, macrophage inflammatory protein-1 α , and regulated on activation, normal T-cell expressed and secreted, in the serum samples.

The concentrations of these cytokines were uniformly unchanged between the groups, Dr. Anderson said during the meeting.

The cytokines IL-2, IL-4, IL-10, interferon- γ , and IL-12p40 were not measured, because a pilot analysis of 40 serum samples showed they did not have reliably detectable concentrations.

The local host response to a number of sexually transmitted infections has been well studied, providing evidence of a local host inflammatory response to organisms including *Trichomonas vaginalis*, *Neisseria gonorrhoeae*, and *Chlamydia trachomatis*.

In addition, there is a long-established association between lower genital tract infection and preterm birth and premature rupture of membranes. Furthermore, inflammatory mediators of local host response have been found in cervicovaginal fluid.

But the current study is one of few that attempt to characterize systemic inflammatory response to such infections, Dr. Anderson said.

Although one large multicenter trial showed a link between preterm birth and treatment of trichomoniasis in pregnancy, the study had several limitations, and failed to explain the mechanism for preterm birth in treated patients. Therefore, the option of not treating patients with asymptomatic trichomoniasis remains unattractive due to medical and public health concerns, Dr. Anderson said.

"We believe that GM-CSF represents a biologically plausible link between a local infection and a systemic response," Dr. Anderson said at the meeting, explaining that serum GM-CSF has been shown to be elevated in other systemic response syndromes, and has been shown to be an important mediator of local infection in animal models of trichomoniasis.

The cytokine may be an important growth factor in placental implantation, she added.

"We therefore conclude that trichomoniasis in pregnancy should not be regarded as a benign condition," Dr. Anderson said.

Further study to "more fully characterize the inflammatory response" to trichomoniasis and other sexually transmitted infections in pregnancy will be planned, Dr. Anderson noted at the meeting. ■

Organ Transplantation Doesn't Worsen Pregnancy Outcomes

BY DOUG BRUNK
San Diego Bureau

Pregnancy outcome in women who have an organ transplant is no worse after they undergo the procedure than it is before they have the surgery, results from a large Swedish population study have found.

"The outcome data in the present study agree well with what is known in the literature: a very high rate of preterm birth, of low birth weight, and of small for gestational age," reported the investigators, who were led by Bengt Källén, M.D., of the Tornblad Institute, University of Lund, Sweden.

"The advantage of the present study is that it represents a total population and that the outcome data were obtained from a medical birth register, based on original medical record data," they said (Br. J. Obstet. Gynaecol. 2005;112:904-9).

Using Sweden's hospital discharge register, the investigators identified women who had an organ transplant during 1973-2002. Their deliveries before and after transplantation were identified from the country's medical birth register over that same period.

A total of 976 deliveries occurred before organ transplantation and 149 after the procedure, which represented only about half the expected number of deliveries, after the researchers adjusted for year of delivery and maternal age.

No statistically significant differences in the odds of having a miscarriage before trans-

plantation vs. after transplantation were seen (odds ratios of 2.2 vs. 3.2, respectively).

High rates of preeclampsia (22% following kidney transplantation and 33% for liver transplantation), preterm birth (46%), low-birth-weight (41%), and small-for-gestational-age babies (17%) were found for deliveries after transplantation, but similar frequencies were found among deliveries that occurred a few years before transplantation.

A congenital malformation was identified in 5.8% of infants born before organ transplantation and in 6.7% of those born after organ transplantation, but the two rates did not differ.

The authors pointed out that "among the 15 infants born after maternal liver transplantation, there were two with a congenital malformation, one of which was complex and serious: esophageal atresia with a heart defect and an iris malformation. This woman was the only one who had been treated with MMF [mycophenolate mofetil]. This may be a coincidence. Only few pregnancies exposed to MMF are published in the literature."

Dr. Källén and colleagues reported that the major reason for the overall pregnancy outcomes observed in the study stems from disease morbidity, not from the transplantation itself.

In addition, the investigators found "no clear-cut effect" of fetal exposure to immunosuppressive drugs on increased morbidity in later life. Studies with longer follow-up are needed, they added. ■

Study: Postpartum Depression Risk Not Increased in HIV Patients

CHARLESTON, S.C. — HIV-infected women were at no greater risk for postpartum depression than were their HIV-negative counterparts in a recent study, Nyota A. Peace, M.D., reported at the annual meeting of the Infectious Diseases Society for Obstetrics and Gynecology.

The retrospective case-control study included 26 HIV-infected pregnant women. There were also 52 uninfected controls who were divided into two groups—those with a high-risk pregnancy and those with a low-risk pregnancy.

The case patients and controls were matched for age, race, and study period, and did not differ in regard to education levels, substance abuse, and history of depression, according to Dr. Peace of New Jersey Medical School, Newark.

High-risk control patients had the highest mean depression scores (8 out of a possible 30 on the Edinburgh Postnatal Depression Scale), but the scores did not differ signifi-

cantly between these patients, the HIV patients (mean score of 5), or the low-risk control women (mean score of 5).

Compared with the women with low depression scores (under 11), those with high depression scores (greater than 11) did not differ in regard to the presence of typical risk factors for postpartum depression, such as young age, pregnancy-induced anxiety, life stressors, and lack of social support.

Although a high prevalence of depression in the HIV-positive population has been reported, data on the association between HIV and postpartum depression are limited.

The findings suggest that high-risk conditions other than HIV infection are linked with higher depression scores, and that factors typically associated with higher risk for postpartum depression are no more prevalent in patients with high depression scores than in those with low depression scores, Dr. Peace said at the meeting.

—Sharon Worcester

The findings suggest that high-risk conditions in pregnancy other than HIV infection are linked with higher scores on a postnatal depression scale.