The median pain score (Figure 1) was not different between baseline and IUD insertion in the lidocaine and placebo groups (61 mm vs 68 mm; p=0.13), and 5 minutes after speculum removal (29 mm vs 36 mm; p=0.52); however, differences were significant at the time of speculum placement (16 mm vs 33 mm; p=0.03) and tenaculum placement (32 min vs 56 mm; p=0.03).

At the 1-week follow-up phone call, 84% of women in the lidocaine group and 90% of women in the placebo group were somewhat or very satisfied with their IUD placement, and 83% and 93%, respectively, would probably or definitely recommend the IUD to a friend.

Prof. Rapkin concluded that although self-administered vaginal lidocaine does not reduce pain with IUD insertion in nulliparous women, it does significantly decrease pain after speculum and tenaculum placement and therefore may be used prior to gynecological procedures involving these instruments.

Monozygotic Twinning Risk Increases With Day 5 Embryo Transfer and Assisted Embryo Hatching

Written by Nicola Parry

Jessica R. Kanter, BS, Emory University, Decatur, Georgia, USA, presented results from an 11-year study showing an increased incidence of monozygotic twin pregnancies over the past decade in association with the use of assisted reproductive technology (ART) [Kanter JR et al. *Obstet Gynecol* 2014]. Results also showed that Day 5 embryo transfer and assisted embryo hatching are associated with an increased risk of monozygotic twinning.

The use of ART has increased dramatically in recent decades, making pregnancy possible for many infertile couples. However, the use of ART has also been associated with a marked rise in the rate of multiple births in the United States, with the incidence of twin births almost doubling from 1971 through 2009 [Kulkarni AD et al. *N Engl J Med* 2013].

When compared with that of traditional fertility, monozygotic twinning is more common after infertility treatment; however, very little is known about the mechanisms involved or the factors contributing to its occurrence. Kanter and colleagues conducted a large population-based surveillance study to examine trends of monozygotic twinning in ART and to determine its association with transfer factors.

The study included 392 136 pregnancies resulting from fresh nondonor embryo transfers that were reported to the Centers for Disease Control and Prevention's National ART Surveillance System between 2000 and 2011.

Data were evaluated to examine trends of monozygotic twin pregnancies, defined as those in which the number of fetal heart tones on first-trimester ultrasound exceeded the number of embryos transferred. The results were subsequently compared with data for singleton pregnancies (1 fetal heart tone present) and other multiple-gestation pregnancies (>1 fetal heart tone present but not more than number of embryos transferred). Adjusted risk ratios (ARRs) were calculated for monozygotic twinning in association with assisted embryo hatching for singleton and other multiple-gestation pregnancies.

The results showed a significant increase in the incidence of monozygotic twinning after ART from 2000 through 2011 (p<0.001), with a higher incidence in Day 5 embryo transfers compared with Day 3 (1.72% vs 0.48%).

Monozygotic twinning was associated with assisted hatching among Day 3 embryo transfers with singleton pregnancies (ARR, 2.19; 95% CI, 1.93 to 2.48) and other multiple-gestation pregnancies (ARR, 2.27; 95% CI, 2.00 to 2.57) and among Day 5 embryo transfers when compared with other multiple-gestation pregnancies (ARR, 1.18; 95% CI, 1.05 to 1.32).

The results show an increased incidence of monozygotic twin pregnancies after ART over the past decade. They also show that Day 5 transfer and assisted hatching are associated with an increased risk of monozygotic twinning.

Kanter concluded that the rising incidence of monozygotic twinning in association with ART warrants a closer look. Prospective trials are still needed.

Similar Outcomes Among Women Treated With 12-Hour Compared With 24-Hour Postpartum Magnesium Sulfate for Preeclampsia

Written by Toni Rizzo

Magnesium sulfate is an effective therapy for preventing or stopping seizures in pregnant women with preeclampsia. Although the standard duration of therapy is for 24 hours postpartum, the optimal length is controversial. Few studies have investigated the efficacy of a shortened duration of magnesium sulfate therapy. The objective of this study, presented by Nicole V. Leal, Instituto Paraibano de Pesquisa, Paraibo, Brazil, was to assess the effects of 12 hours of magnesium sulfate compared with 24 hours of treatment in postpartum women with severe preeclampsia [Leal V et al. *Obstet Gynecol* 2014].

A total of 120 postpartum women with severe preeclampsia were enrolled in this open-label, randomized clinical trial. The women were randomized to therapy with

magnesium sulfate for 12 hours (n=60) or 24 hours (n=60). The data were analyzed on an intention-to-treat basis, and the intervention was not masked.

Women treated for 12 hours had decreased exposure to magnesium sulfate compared with those treated for 24 hours. Clinical outcomes were similar in both groups, and no cases of eclampsia were diagnosed in either group. There was no need to reinitiate treatment with magnesium sulfate in either group after the scheduled course of therapy was completed. Of note, magnesium sulfate therapy was extended in 3 of the women receiving the therapy for 12 hours. Women in the 12-hour treatment group had significant reductions in the duration of postpartum indwelling bladder catheter use and in the time they were required to be on bed rest. The interval between delivery and maternal contact with the newborn infant also was significantly reduced in women in the 12-hour magnesium sulfate therapy group compared with those in the 24-hour magnesium sulfate therapy group.

The investigators concluded that treatment with postpartum magnesium sulfate for 12 hours instead of 24 hours is associated with decreased overall exposure to magnesium sulfate, a shorter interval between delivery and maternal-newborn bonding, decreased indwelling catheter time, and a quicker return to ambulation.

Pregnancies Reduced by Long-Acting Reversible Contraception Training in Family Planning Clinics

Written by Toni Rizzo

Although approximately half of all pregnancies in the United States are unintended, the use of highly effective contraceptives, such as intrauterine contraceptives and implants, is low. Many health care providers in the United States lack knowledge of current scientific information on long-acting reversible contraception (LARC) and do not routinely offer these methods when counseling patients at the highest risk for unintended pregnancy, including adolescents, nulliparous patients, and patients who have undergone abortions.

The aim of the National Trial of Contraceptive Acceptability [Harper CC et al. *Obstet Gynecol* 2014; ClinicalTrials.gov identifier NCT01360216], presented by Cynthia C. Harper, PhD, University of California, San Francisco, USA, was to determine whether a clinic-based education and training intervention for clinicians and counselors on LARC would result in increased use of LARC among clinic patients.

This cluster-randomized trial was conducted at 40 Planned Parenthood sites. Twenty sites were randomly allocated to receive LARC intervention training, and 20 control clinics did not receive training. In total, 1500 women ages 18 to 25 years were recruited at 23 family planning clinics and 17 abortion clinics. Method-choice analysis was conducted with 802 patients from the intervention sites and with 698 patients from the control sites. Pregnancy outcomes were monitored over 12 months with survey data, medical record review, and pregnancy tests. A blinded outcomes assessor conducted an intention-to-treat survival analysis with shared frailty.

The training intervention consisted of a half-day continuing medical education–accredited LARC education and hands-on training given to clinic staff members by an expert physician–counselor team. Instruction included updated method indications, side effects, benefits, risks, and patient eligibility on the basis of the Centers for Disease Control and Prevention's Medical Eligibility Criteria for Contraceptive Use. The training also included videos of young LARC users and providers who integrated LARC into routine practice; hands-on training with models; counseling skills, including tiers of effectiveness and ethics; and technical assistance for billing and clinic flow. All sites provided contraception under usual cost conditions.

In total, 739 patients from the intervention clinics and 623 patients from the control clinics completed follow-up for the pregnancy analysis. Baseline characteristics of the intervention and control patients were similar. According to the patient survey results, providers discussed LARC at 71% of intervention sites and 39% of control sites ($p \leq 0.001$) and oral contraceptives or depot medroxyprogesterone acetate at 81% of intervention sites and 83% of control sites. The women correctly ranked method effectiveness at 44% of intervention sites and 27% of control sites ($p \leq 0.001$), and 28% of women at intervention sites and 17% of women at control sites decided to use LARC ($p \leq 0.001$).

At family planning clinics, pregnancy rates were significantly lower than at intervention sites (7.9/100 person-years [PY]) compared with control sites (15.4/100 PY; HR, 0.53; 95% CI, 0.33-0.86; $p \leq 0.001$). At abortion clinics, pregnancy rates were 26.5 per 100 PY at intervention sites and 22.3 per 100 PY at control sites (HR, 1.35; 95% CI, 0.91-2.01). Kaplan-Meier analysis of the intervention effect in a model with an interaction for setting type demonstrated a significant effect of training on reduced pregnancies at family planning clinics but not at abortion clinics.

This half-day, replicable training intervention effectively reduced pregnancy rates at family planning clinics. The intervention did not reduce pregnancy rates at abortion care clinics, likely because of current contraceptive cost policies in this setting. This trial contributes data to the available evidence on methods for reducing unintended pregnancies in the United States.