Provision of effective contraception in the postpartum period is a vital component of pregnancy care. The intrauterine device (IUD) is an excellent method of contraception and is appealing for use in the postpartum period. Immediate postplacental insertion of the IUD (insertion within 10 minutes of delivery of the placenta) has been studied for decades, and it is practiced worldwide. This method of insertion is safe and effective, although expulsion rates appear to be higher than after interval insertion. While expulsion rates for postplacental insertion are higher after vaginal delivery compared to cesarean, the expulsion rate after cesarean may be higher than after interval insertion. Nonetheless, as few as 40 to 55 percent of women return for IUD placement, so postplacental IUD insertion may lead to an increase in uptake despite the higher expulsion rate.

We conducted a two-site randomized controlled trial comparing immediate postplacental insertion of the levonorgestrel-releasing intrauterine system (LNG-IUS) at the time of cesarean delivery to interval placement at a follow-up visit 4-8 weeks after delivery. Our primary outcome was use of the LNG-IUS at 12 months after delivery, and we also compared whether the LNG-IUS was placed, expulsion, satisfaction, and complications between the two groups. Initially designed to be a trial of 120 women, difficulties in recruitment due to unanticipated changes in hospital obstetrical policies and population, led us to terminate the study early, after 42 women had been randomized.

Analysis is ongoing, but in preliminary analysis, we found that use of the LNG-IUS at 12 months after delivery was higher in the postplacental group compared to the interval insertion group, but the difference did not reach statistical significance (60% vs. 41%, p=.35). More women in the postplacental group had the LNG-IUS placed (95% vs. 82%, p=.35), which also did not reach statistical significance. Expulsion was more common in the postplacental group (20% vs. 0%, p=.04). Of the 4 participants who experienced expulsion, 2 (50%) had the LNG-IUS replaced and were using the LNG-IUS at the 12-month visit. All 4 expulsions occurred among participants who had the IUD inserted at the 2nd study site, possibly due to relative provider inexperience with IUD placement at this site. Among women who used the LNG-IUS, satisfaction was high, and there was no difference in satisfaction based on whether the device was placed during cesarean vs. at the follow-up visit. There were no reported perforations, infections, or serious complications in either group.

Postplacental placement of the LNG-IUS at the time of cesarean delivery is feasible and safe. Although expulsion appears to be higher after postplacental insertion than after interval insertion, use at 12 months is similar or higher, making this an excellent option for patients who wish to avoid insertion at the follow-up visit after delivery and for women who are at higher risk for noncompliance with that visit. Provider experience may play a role in expulsion after postplacental insertion.