

## **IMMEDIATE POST-CESAREAN SECTION DELIVERY OF A NEW IUD INSERTION HELPS WOMEN AND PROVIDES A MEANS OF REDUCING CESAREAN DELIVERIES SIMULTANEOUSLY**

A 2010 report from the WHO estimates that 18.5 million births worldwide are by cesarean section accounting for approximately 30% of all births.<sup>1</sup> Various worldwide regulator and governmental agencies are calling for a reduction in the incidence of cesarean deliveries, including in Turkey in an attempt to decrease their numbers. About 800,000 to 900,000 cesarean sections are conducted each year in Turkey, approximately 40% in public and 60% in private hospitals (Source: Ministry of Health).

Various contraceptive methods are available to women including hormonal, barriers and injectable forms. Unfortunately, many of these methods have a high degree of failure, unless used perfectly. Most clinicians and the World Health Organization recommend an interdelivery interval of 18 to 24 months as a second pregnancy too soon after the first could have detrimental effects on the woman herself, her ability to carry the baby to term, the viability of the infant and its overall growth/development. Women undergoing cesarean sections with an interdelivery interval shorter than 18 months are considered at risk for uterine rupture. Prevention of uterine rupture post-cesarean section is required for 18 to 24 months to allow for the wound to heal as well as for the woman to recover from her pregnancy.

The ideal time for contraception either as a precautionary measure or as a family planning tool is immediately post-delivery. Immediate contraception is convenient and timely since a woman is actively evaluating her current and future family planning options. Some form of contraception is clearly required after pregnancy; however, a woman's return to fertility post-delivery is not always predictable. It can occur as soon as 3 weeks in non-lactating women and may not necessarily be accompanied by menses. The pregnancy environment represents the near ideal timing for discussions with patients in need of contraception, the nature of the products available, their individual benefit and risks. The patient's receptiveness and willingness to select a given form of contraception is a critical component in allowing a woman to adequately manage her contraception needs.

Immediate postpartum intrauterine device (IUD) insertion does deserve greater attention as it can provide immediate contraception, prevents repeat unintended pregnancies, and as discussed may serve to reduce the incidence or need for secondary cesarean delivery. Of all the available birth control methods IUDs represent the near ideal form being recommended by physicians and gynecological organizations worldwide. They have the advantage of high effectiveness as well as having an extremely low failure rate in part because of the lack of involvement by the women. Unfortunately, insertion of conventional T-shape IUDs immediately post-placenta delivery is limited by their high expulsion and displacement rates and narrow time windows for insertion. A study conducted in cesarean women by Dr. Çelen of the Zekai Tahir Burak Women's Health Training and Education Hospital, 06230, Ankara, Turkey, found a continuation rate of only 62% after 12 months, while the T-shaped IUD has a lifespan of 10 years. Eighteen percent expulsions of the IUD occurred within the first year and many were removed for abnormal bleeding and pain.

Over the past decades attempts have been made to solve the expulsion problem encountered with T-shape IUDs by modifying existing devices. However, these attempts did not appear beneficial.

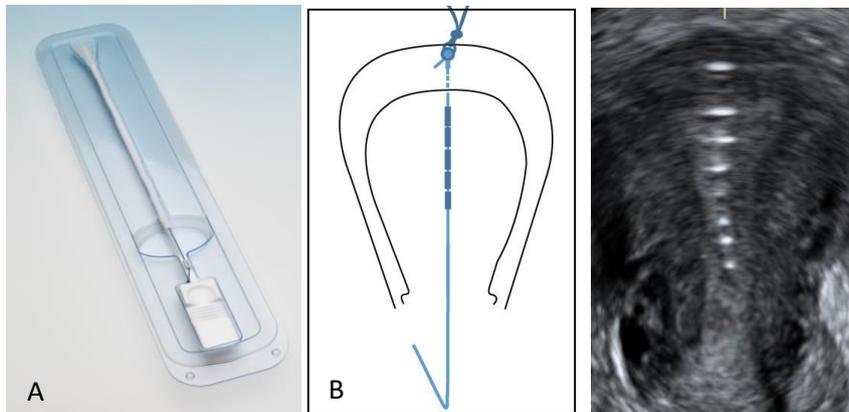
A new surgical focused approach was devised for suspending the frameless copper IUD for intracesarean insertion which takes advantage of the full visualization and access to the uterus that is achieved during cesarean delivery. The technique consists of the precise placement and fixation of a tiny anchoring knot in the fundus of the uterus immediately after delivery of the baby. (Figure 1). The entire procedure can be performed in under 4 minutes with no discomfort to the patient and minimal surgical risk.

A copper releasing frameless IUD and inserter specifically designed to facilitate use immediately post-placental delivery after caesarian deliveries is just now commercially available in Turkey. Anchoring of

frameless design IUDs to the fundal surfaces of women has been medically and commercially available throughout Europe for many years in the form of GyneFix.

A study with this new IUD conducted in 100 women has shown the frameless IUD to be well tolerated, safe and effective. There was no significant change in postpartum hemorrhage, continuance of lochia, and healing of uterus was normal. Frameless IUDs have the advantage over framed T-shape IUDs as the latter may cause discrepancy with the uterine cavity and displacement and embedment during involution of the uterus, particularly during prolonged lactation as hyperinvolution of the uterus in these women is not uncommon.

It is evident that by maximizing the time between pregnancies and delivery will serve to increase the probability of a woman being able to deliver via conventional vaginal delivery after cesarean delivery. The fundamental issue is how to maximize this likelihood. Adequate contraception in the immediate post-delivery environment (whether by OCs, IUD or other forms of LARC) would have the benefit of not only reducing the incidence of unintended pregnancy but, with respect to women having cesarean delivery, may have the added benefit of allowing for follow-on vaginal deliveries. The current frameless IUD is active for 5 years but a frameless device for immediate postpartum insertion, lasting 10 years, up to 20 years is in development. This new IUD as well as the future developments may be highly beneficial for women.



**Figure 1** A) Insertion apparatus for the insertion of the frameless IUD following Cesarean section delivery; B) Illustration of the position of the IUD in the post-placental uterus.