

One-Rod Contraceptive Implant as a Postpartum Contraceptive Option

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In an effort to increase family planning coverage, reduce high-risk pregnancies, reduce the incidence of unwanted pregnancies, and reduce maternal mortality, long-acting reversible contraceptives (LARC) in the form of IUDs and implants are routinely used as postpartum contraception. Postpartum contraception use supports the reduction of maternal and infant morbidity and mortality rates.^{1,2} The use of implant contraception has undergone several developments from six-rods, two-rods to one-rod.³

A one-rod contraceptive refers to a type of LARC implant, typically containing a progestin hormone, that is inserted under the skin of a woman's upper arm. Included among the contraceptive techniques thought safe for immediate postpartum usage, it offers efficient, reversible contraception for several years (generally 3-5 years depending on the brand).⁴ A postpartum contraceptive helps to avoid unplanned and closely spaced pregnancies,^{6,7} allows a woman's body enough time to recover from birth, therefore lowering the risk of maternal anemia and other complications.⁶ Liaquat University Hospital Hyderabad from 1st July to 31st December 2018. Out of 2100 total deliveries, 398 postpartum women with second or higher order births were included. Pregnant women, primiparas and those who were not willing to participate were excluded. They were interviewed face to face by principal investigator and her team members and required information was collected on predesigned Performa. Outcome variable was interpregnancy interval in months. Chi-square test was used to see association Results: Postpartum contraception utilization (PPC also progestin-only contraceptives and non-hormonal strategies are usually preferred for breastfeeding women as estrogen-containing methods may lower milk production.⁸

One-rod contraceptive implants such as the etonogestrel (ENG) implant are highly effective in preventing pregnancy, with efficacy rates reported as over 99% in multiple studies.^{3,9} It works by releasing a hormone (etonogestrel or levonorgestrel) that prevents ovulation and thickens cervical mucus to block sperm.^{10,11} The approved duration of use for the one-rod contraceptives is 3 years.³ However, extended use up to 5 years has been studied and shown to maintain 100% efficacy in years 4 and 5.¹³

One-rod contraceptive implants are generally very safe and well-tolerated, with serious complications being rare. Common side effects primarily involve changes in menstrual bleeding patterns, which can include amenorrhea 32.9%, shortened menstrual period 22.9%, lengthened menstrual period 14.2%. These menstrual changes are not harmful but can be bothersome for some users. Headaches, breast tenderness or soreness, acne, nausea, dizziness, mood changes or depression, weight gain, vaginal dryness or soreness, and slight insulin resistance are other side effects.^{3,9,12} One-rod contraceptives started as a immediate postpartum initiation does not have a bad effect on infant growth from birth to 6 months, onset of lactogenesis, initiation or continuation of breastfeeding at 3 or 6 months postpartum, and post partum venous thromboembolism.^{14,15}

In terms of comfort, the implant is a small rod inserted under the skin of the upper arm and can be felt beneath the skin. Local effects at the insertion site may include soreness,

bruising, pain, swelling, or infection, though infections are uncommon. Rarely, the implant may move slightly from its original position, which should be checked by a healthcare provider if suspected.³

One-rod implants are comparable in effectiveness to two-rod implants but may result in less weight growth and shorter insertion or extraction durations. Implants are safer for breastfeeding rather than estrogen-containing pills. Copper IUD also highly effective and long-lasting but differ in side effect profiles and insertion procedures.^{16,17} Overall, one-rod contraceptive implants offer a highly effective, safe, and convenient IUD with manageable side effects and the flexibility of removal when desired.³

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