Progesterone vaginal ring

Essential medicine status

Section: 22. Medicines for reproductive health and perinatal care > 22.1. Contraceptives > 22.1.6. Intravaginal contraceptives

ATC codes: G03DA04

Indication	Contact with health services for contraceptive management ICD11 code: QA21.Z
INN	Progesterone
Medicine type	Chemical agent
List type	Core
Additional notes	For use in women actively breastfeeding at least 4 times per day
Formulations	Local > Vaginal > vaginal ring: 2.074 g micronized progesterone
EML status history	First added in 2015 (TRS 994)
Sex	Female
Age	Adolescents and adults
Therapeutic alternatives	The recommendation is for this specific medicine
Patent information	Patents have expired in most jurisdictions Read more about patents.
Wikipedia	Progesterone vaginal ring
DrugBank	Progesterone

Summary of evidence and Expert Committee recommendations

An application was submitted by the Population Council, New York, for the inclusion of a progesterone contraceptive vaginal ring (PCVR) on the Model List to provide contraception for breastfeeding women. Reviews of the application were prepared by two members of the Expert Committee. Correspondence in support of the application was also received from the WHO Reproductive Health and Research department. In 2012, an estimated 222 million women had an unmet need for contraception and family planning globally (1). An analysis of survey data from 28 countries across Latin America, sub-Saharan Africa, Asia and the Middle East indicated that only approximately 30% of postpartum women are using a method of contraception. During their first year postpartum, 65% of women have an unmet need for contraception (2). Limited contraceptive choices are available for postpartum breastfeeding women. Progestogen-containing and copper-containing intrauterine devices (IUDs) and progestogen-containing implants are suitable for postpartum women but require the involvement of a skilled health-care provider for insertion, which can limit access and use in many developing countries. The progesterone contraceptive vaginal ring is an alternative contraceptive option for breastfeeding women. The Expert Committee considered that, in addition to accessibility, the potential advantages of the PCVR include ease of use (user-controlled – women can insert and remove the ring themselves, following initial instruction), the fact that it does not require daily action, and its good acceptability among women. In a multicentre study that evaluated the PCVR in comparison with the Copper T 380A IUD, the PCVR had a one-year pregnancy rate of 1.5 per 100, which did not differ significantly from the IUD ($P > 0.05$). More than half of the participants with a PCVR were continuing at 6 months post-admission and 23.5% were still using the PCVR and breastfeeding one year after admission. Women with the IUD, however, had higher continuation rates ($P < 0.001$) at both time points. PCVR users had more complaints of vaginal problems but had fewer vaginal disorders on examination (3). Three other studies confirm the contraceptive efficacy, acceptability and safety of the PCVR for contraceptive use by lactating women (4-6). With regard to safety, no serious adverse events have been reported in the studies. The most frequent adverse events among PCVR users were vaginal complaints (e.g. discharge, nonspecific vaginitis, fungal or yeast infections, trichomonal infection and urinary discomfort); the rate was 3.5 per 100 women–months which was significantly higher

than for IUD users (1.9 per 100 women–months) (6). Progesterone has a short half-life (3 to 90 minutes) and undergoes rapid absorption from the gastrointestinal tract and extensive hepatic metabolism; it is therefore unlikely that the small amount of progesterone excreted in breast milk can affect the infant. The PCVR has been shown to be safe for breastfed infants, with no differences in growth rate compared with infants breastfed by IUD users (7). The Expert Committee noted that a recommendation for use of a progesterone-releasing vaginal ring was added to WHO's Medical eligibility criteria for contraceptive use (MEC) as a new method in 2015. The fifth edition of the MEC includes a category 1 (without restriction) recommendation for use of PCVR by women who are actively breastfeeding and are at least 4 weeks postpartum (8). The Expert Committee considered that the PCVR is a safe and effective contraceptive method for breastfeeding women and confers a number of advantages. It contains the natural hormone progesterone. Systemic progesterone levels remain low in comparison with other orally administered progesterone-only contraceptives, which have a prolonged half-life. Its use does not interfere with the production of milk, the growth of the child or the health of the mother and child. In addition, following initial examination and instructions for use, the PCVR can be inserted and removed by the user without the intervention of a health-care provider. Finally, the PCVR does not require cold-chain storage or specialized facilities. The Expert Committee noted that the Population Council has negotiated a cost-plus price agreement with the PCVR manufacturer for public-sector procurement. The aim of this agreement is to ensure public-sector availability of PVCR at the lowest possible cost. The Expert Committee acknowledged that expanding the use of modern contraceptive methods among women who breastfeed is a public health concern. Based on the efficacy, safety, ease of use and user-control of the PCVR for contraceptive use by breastfeeding women, the Committee recommended that the PCVR be added to the core list of Model List of Essential Medicines for contraception in women who are actively breastfeeding at least four times a day during the first year postpartum. The Committee recommended listing of PCVR in a new subsection of the Model List – 18.3.6, Intravaginal contraceptives. The Committee considered that it was important for people to have a choice of contraceptive methods available to them, and that the addition of new, effective and safe contraceptive alternatives such as the PCVR for breastfeeding women could lead to improved contraceptive use and resultant beneficial outcomes. 1. Darroch JE, Singh S. Trends in contraceptive need and use in developing countries in 2003, 2008, and 2012: an analysis of national surveys. Lancet. 2013;381(9879):1756-62. 2. Ross JA, Winfrey WL. Contraceptive use, intention to use and unmet need during the extended postpartum period. Int Fam Plan Perspect. 2001;27(1):20-7. 3. Sivin I, Diaz S, Croxatto HB, Miranda P, Shaaban M, Sayed EH, et al. Contraceptives for lactating women: a comparative trial of a progesterone-releasing vaginal ring and the copper T 380A IUD. Contraception. 1997;55(4):225-32. 4. Diaz S, Zepeda A, Maturana X, Reyes MV, Miranda P, Casado ME, et al. Fertility regulation in nursing women. IX. Contraceptive performance, duration of lactation, infant growth, and bleeding patterns during use of progesterone vaginal rings, progestin-only pills, Norplant implants, and Copper T 380-A intrauterine devices. Contraception. 1997;56(4):223-32. 5. Chen JH, Wu SC, Shao WQ, Zou MH, Hu J, Cong L, et al. The comparative trial of TCu 380A IUD and progesterone-releasing vaginal ring used by lactating women. Contraception. 1998;57(6):371-9. 6. Massai R, Miranda P, Valdes P, Lavin P, Zepeda A, Casado ME, et al. Preregistration study on the safety and contraceptive efficacy of a progesterone-releasing vaginal ring in Chilean nursing women. Contraception. 1999;60(1):9-14. 7. Carr SL, Gaffield ME, Dragoman MV, Phillips S. Safety of the progesterone-releasing vaginal ring (PVR) among lactating women: A systematic review. Contraception. 2015;doi:10.1016/j. contraception.2015.04.001 [Epub ahead of print]. 8. Medical eligibility criteria for contraceptive use, fifth edition: Executive Summary. Geneva: World Health Organization; 2015. Available from: http://www.who.int/reproductivehealth/ publications/family_planning/Ex-Summ-MEC-5/en/.