

# **ANALYSIS OF THE MAIN INTERCURRENCIES IN LARCS USERS IN PRIMARY HEALTH CARE**

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**Abstract:** The Long-Term Reversible Contraceptive Methods (LARCS), represented by the Copper and Levonorgestrel Intrauterine Devices (IUD), in addition to the subdermal implant, are widely indicated in the practice of family planning in the scope of primary health care, given their high rates of efficacy, safety and adherence. However, such characteristics can be refuted due to the occurrence of adverse effects, which range from simple complications to more severe complications, which require other levels of health care for their management. Taking this into account, it became the main objective of this study to analyze the degree of incidence of the main complications in users of LARCS in primary care. For this purpose, a descriptive methodology was used, and a literature review was carried out based on articles published in Pubmed, Scielo and health journals, including the Brazilian Journal of Gynecology and Obstetrics. Adversities related to the IUD have been observed to include dysmenorrhea, bleeding, expulsion of the device and, less frequently, ectopic pregnancy, perforation of the uterus and adjacent structures, and pelvic inflammatory disease. In relation to the subdermal implant, alterations such as amenorrhea, acne, weight gain, irritability, headache, dizziness and breast tenderness have been documented. Thus, according to the evidence collected, the superiority of LARCS in relation to other contraceptive methods available in the SUS (Unified Health System) is notorious, with regard to efficacy versus undesired effects.

**Keywords:** LARCS; IUD; Subdermal Implant; Contraceptive Methods and Intercurrences.

## INTRODUCTION

Unplanned pregnancy is an important public health problem and increasing access to long-term reversible contraceptive methods (LARCS), especially in the context

of family planning in primary health care, can significantly contribute to changing this scenario, given its high effectiveness, safety, satisfaction and adherence. By definition, LARCS have an average durability of 3 to 10 years, being represented by Copper and Levonorgestrel (LNG) intrauterine devices (IUDs), in addition to the subdermal implant, recognized in Brazil as Implanon. These methods are recommended for all women who want contraception, especially adolescents, nulliparous and immediate postpartum women, and for those who have contraindications to methods that contain estrogen in their formulation. Therefore, it is essential to train health professionals for guidance in relation to the mechanism of action, reversibility, effectiveness, adverse effects and non-contraceptive benefits to improve accessibility to such methods (MACHADO et al, 2017).

The IUD consists of a small, flexible device made of copper or levonorgestrel (LNG) that is placed inside the uterine cavity. The difference between these two devices is mainly linked to the time of vitality, risks of getting pregnant and mechanism of action. Its placement is contraindicated only in cases of uterine anatomical abnormalities, active gynecological infections, present or suspected pregnancy, uterine cancer and gynecological bleeding of unknown origin. Specific restrictions include copper allergy, in the case of the Copper IUD, and breast cancer in the last 5 years or liver disease, in the case of the LNG IUD (PEREIRA et al, 2021).

The Copper IUD is formed by a rod coated with the metal, which, when releasing small amounts of the ion in the uterus, interferes with sperm vitality and motility, in addition to reducing the survival of the egg in the genital tract (FEBRASGO, 2015). Their chances of pregnancy range from 0.6 to 0.8%

and they can remain in the uterine cavity for up to 10 years (PEREIRA et al, 2021).

The Mirena IUD, IUS or hormonal IUD, by releasing 20 mcg of levonorgestrel per day into the uterine cavity, causes endometrial atrophy, cervical mucus thickening and ovulation inhibition, resulting in menstruation blockage (FEBRASGO, 2015). The chances of getting pregnant decrease to 0.2% and can remain in the woman's body for up to 5 years (PEREIRA et al, 2021)

Another device, recently arrived in Brazil, is the Kyllena IUD. This device was designed to suit women who have a narrow cervical canal or even those women who have a smaller uterine cavity. Therefore, it is mainly indicated for nulliparous women and adolescents. It is similar to the Mirena IUD with regard to the mechanism of action, time of vitality and risks of pregnancy, differing only in terms of the hormone dose, which is lower, generating fewer adverse effects (PEREIRA et al, 2021)

Subcutaneous implants are small sticks of permeable plastic material, composed of progesterone, which is gradually released. In Brazil, only Implanon is approved for use, which contains 68 mg of etonogestrel and comes in the form of a stick measuring 4 cm long and 2 mm thick. This method provides very high efficiency, with the Pearl index being equal to zero. Its mechanism of action consists of inhibiting ovulation and thickening cervical mucus (FEBRASGO, 2015). Hypersensitivity to the components, current breast cancer and pregnancy are the only absolute contraindications of the implant (BRAGA et al, 2015). However, because progesterone reduces the tissue's need for glucose, this generates hyperinsulinemia, which makes the use of this method unfeasible for women with Polycystic Ovary Syndrome (PCOS) due to the potential risk of diabetes and cardiovascular disease that this

endocrinopathy. by itself causes (ODERICH et al, 2010).

Its use is recommended in vulnerable populations or with difficult access to the health system as a way to ensure the reduction of unplanned pregnancies and a safe intergestational interval, that is, greater than 18 months. Thus, adolescents, alcohol and drug users are included in this risk group (BRAGA et al, 2015).

Despite the literature being very positive for the use of LARCS in several aspects, the reported complications justify its discontinuation rates, which vary from 18.1% to 26% in one year. However, such rates are still lower than the 34.8% found in just three months of OAC use (BARRETO et al, 2021).

This way, the main objective to be met by this work is to obtain new perspectives about the safety of LARCS, analyzing the main complications that are reasons for discontinuation of the method according to the degree of incidence.

## **MATERIAL AND METHODS**

A descriptive methodology was used, and a literature review was carried out based on articles published in PubMed, Scielo and health journals, including Brazilian Journal of Development, Brazilian Journal of Health Review and Brazilian Journal of Gynecology and Obstetrics, in addition to the 2015 Federation of Gynecology and Obstetrics Contraception Manual. This research was carried out based on the descriptors "LARCS", "Intrauterine Device (IUD)", "Subdermal Implant" and "Intercurrences", selecting articles published between 2010 and 2022, written in Portuguese, English and Spanish.

## **RESULTS AND DISCUSSION**

Most studies have shown that the complications associated with the use of the IUD, at the primary care level, include

dysmenorrhea and bleeding. Although rare, complications such as device expulsion, Pelvic Inflammatory Disease (PID), ectopic pregnancy and uterine perforations can also occur and require diagnostic confirmation through imaging tests, especially Transvaginal Ultrasonography (TVUS) (TEIXEIRA et al, 2022; GUEDES et al, 2022).

Dysmenorrhea and abnormal bleeding, as mentioned earlier, is one of the main complaints related to the use of copper IUDs at the primary health care level (BARRETO et al; 2022). This condition occurs mainly in the first months after insertion of the device and refers to the adaptation period, since it is seen as a foreign body by the patient's body. In addition, such symptoms may be due to the malposition of the device in the uterine cavity (GUEDES et al, 2022).

Regarding the expulsion of the device, higher rates were reported when inserted in the immediate postpartum period, especially when delivery occurred through the vaginal route (SCHERER, 2021).

The occurrence of Pelvic Inflammatory Disease occurs in less than 1% of the cases due to the pre-existence of STI at the insertion of the device, mainly of cervicitis. In these cases, there is an inflammatory process of the female upper genital tract secondary to the ascension of microorganisms from the cervix to the endometrium, usually due to manipulation of the uterine cavity during the procedure, which may progress to fallopian tubes and peritoneum. et al, 2021).

Uterine perforations or perforations in adjacent structures may occur during the IUD insertion process, resulting in a clinical picture of an acute abdomen requiring immediate surgical approach. However, parity, implantation time, previous abortions, professional experience, postpartum time and uterus position seem to be related as risk variables for perforation. This condition

occurs with a frequency that varies from 0.005% to 1.3% (PORTELA et al, 2013).

Another complication resulting from the use of the IUD is ectopic pregnancy, which consists of the development of the blastocyst outside the uterine cavity, which can occur in the tubes, ovaries, cervical canal and even in the abdominal cavity. A possible explanation for this relationship is the alteration of the ciliary beating and the contractility of the fallopian tubes caused by Copper ions, which result in the delay of ovarian transport, as well as favoring the local installation. This complication is present in 2.9 to 8.9% of cases (CAMPOS et al, 2021).

Regarding the subdermal implant, milder changes such as amenorrhea or hypermenorrhea, menstrual irregularity, acne, weight gain, breast tenderness, nausea and vomiting, decreased libido, dizziness and headache have been documented (GOMEZ et al, 2021). Highlighting the change in the bleeding pattern as the main adverse effect, most of the time, it is favorable ( amenorrhea, infrequent and regular), but about 20% of women may have an unfavorable pattern (frequent and prolonged).

The cause of irregular bleeding is still unknown, although it is believed to be due to endometrial instability caused by an increase in endometrial metalloproteinases, formation of fragile microvessels and reactive oxygen species (BRAGA et al, 2015).

Complications	percentage
Poor Positioning (pain and bleeding)	10 to 25%
Ectopic pregnancy	2.9 to 8.9%
perforations	0.005 to 1.3%
DIP	< 1%

Table 1. Intercurrences in Intrauterine Device (IUD) Users.

Complications	percentage
menstrual irregularity	61%
amenorrhea	39%
headache	36%
Weight gain	35%
Dizziness	25%
Nausea and Vomiting	21%
Acne	16%
mastodynia	14%
weight decrease	4%
Decreased libido	2%
Pain at the application site	2%

Table 2. Intercurrences in Subdermal Implant Users.

## CONCLUSION

Thus, according to the evidence collected and the emerging need for effective and safe contraception for family planning purposes, the superiority of LARCS is notorious given that, despite the potential for severe complications, its occurrence was insignificant. In addition to this, it is worth noting that the gynecological follow-up of the patient after adopting the method is of paramount importance to ensure better management of possible complications, thus ensuring the success of her choice.

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