

Chapter 17

Analysis on the main complications in LARCS users in primary care

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ABSTRACT

Long-term Reversible Contraceptive Methods (LARCS), mainly represented by copper and levonorgestrel intrauterine devices (IUDs) (Mirena and Kyllena), in addition to subcutaneous implant (Implanon), are widely indicated in family planning practice in primary health care, given their high rates of efficacy, safety and adem. However, such characteristics can be contradicted due to the occurrence of adverse effects, ranging from simple complications to more severe complications, which require other levels of health care for their management. Taking this into account, it became the

objective of this study to analyze the incidence of the main complications in LARCS users in primary care according to the percentage of occurrence. For this purpose, descriptive methodology was used, and a literature review was carried out based on articles published on pubmed, scielo and health journals, including The Brazilian Journal of Health Review. Thus, it was observed that adversities related to the use of IUDs include dysmenorrhea and bleeding (up to 25%) and, less often, ectopic pregnancy (2.9 to 8.9%) and uterine perforation and adjacent structures (up to 1.3%). In addition, pelvic inflammatory disease has also been reported (less than 1%), being more prevalent in cases of cervicitis pre-existing at device insertion. Regarding subcutaneous implants, more moderate alterations such as amenorrhea (39%), acne (16%), weight gain (35%), headache (36%), dizziness (25%) and mastalgia (14%), as well as changes in the gastrointestinal tract (21%). Thus, according to the evidence collected, the superiority of LARCS in relation to the other methods available in the SUS is notorious, with regard to efficacy versus unwanted effects.

Keywords: LARCS, IUD, subcutaneous implant, contraception, complications.

1 INTRODUCTION

Unplanned pregnancy is an important public health problem and increased access to long-term reversible contraceptive methods (LARCS), especially in the context of reproductive planning, can contribute significantly to changing this scenario, given its high efficacy and safety, in addition to the satisfaction and adhering of users. By definition, LARCS have a durability of 3 to 10 years, being represented by the intrauterine devices (IUD) of Copper and Levonorgestrel (LNG), in addition to the subcutaneous implant, recognized in Brazil as Implanon. These methods are recommended for all women who desire contraception, especially adolescents, nulliparas, immediate puerperal women and for those who have estrogen contraindications. (MACHADO et al, 2017).

The IUD consists of a small and flexible T-shaped device composed of Copper or Levonorgestrel (LNG), which is positioned inside the uterine cavity. The difference between both devices is mainly linked to durability, failure rates and mechanism of action. Its insertion is contraindicated in cases of uterine anatomical abnormalities (bicornio uterus, septado or intense cervical stenosis), active gynecological infections, ongoing or suspected pregnancy, uterine cancer and gynecological bleeding of unknown cause.

Specific restrictions include copper allergy in the case of Copper IUD and breast cancer in the last 5 years, in the case of LNG IUD (PEREIRA et al, 2021; GUEDES et al, 2022).

Copper IUD is formed by a metal-coated rod, which, by releasing small amounts of the ion into the uterus, interferes with sperm vitality and motility, in addition to decreasing the survival of the egg in the genital tract, not interfering with ovulation (FEBRASGO, 2015). In addition, the copper-induced inflammatory response generates an increase in cytotoxic cytokines, responsible for increased prostaglandin production and inhibition of endometrial enzymes (GUEDES et al, 2022). Their chances of pregnancy range from 0.6 to 0.8% and can remain in the uterine cavity for up to 10 years (PEREIRA et al, 2021).

Mirena IUD, SIU or hormonal IUD, when releasing 20 mcg of levonorgestrel per day in the uterine cavity, causes endometrial atrophy, thickening of cervical mucus and inhibition of ovulation, resulting in amenorrhea (FEBRASGO, 2015). The chances of becoming pregnant decrease to 0.2% when compared to the Copper IUD, and may remain in the woman's body for up to 5 years (PEREIRA et al, 2021)

Another device, new to Brazil, is the Kyllena IUD. This device was designed in order to fit women who have a narrow cervical canal or reduced uterine cavity, being indicated, therefore, for nulliparas and adolescents. It is similar to Mirena IUD with regard to the mechanism of action, time of vitality and risks of pregnancy, differing, in addition to size, in terms of the hormone dose, which is lower (PEREIRA et al, 2021).

Subcutaneous implants are small rods of permeable plastic material (4 cm long by 2 mm thick), composed of 68 mg of etonogestrel, which is gradually released into the bloodstream. Represented by Implanon in Brazil, it provides a very high efficacy and its mechanism of action is translated by the inhibition of ovulation, in addition to the thickening of cervical mucus (FEBRASGO, 2015). Hypersensitivity to components, current breast cancer and pregnancy are the only absolute contraindications of the implant (BRAGA et al, 2015). However, because progesterone reduces the need for glucose by tissues, the hyperinsulinemia caused makes it impossible to use this method by women with Polycystic Ovary Syndrome (PCOS) due to the potential risk of diabetes and cardiovascular disease that this endocrinopathy alone can entail (ODERICH et al, 2010).

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

Although the literature is very positive for the use of LARCS in several aspects, the reported complications justify its discontinuation rates ranging from 18.1% to 26% in one year. However, these rates are still lower than the 34.8% found in only three months of combined oral contraceptive use, given its most serious adverse effects, such as on the cardiovascular system (BARRETO et al, 2021; SANTOS et al, 2021).

In addition, the disbursement to combined oral contraceptives in the long term is higher than that spent on the acquisition of LARCs devices, being another important reason for discontinuation (FARAH, 2020).

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

2 MATERIAL AND METHODS

Descriptive methodology was used, and a literature review was carried out based on articles published on 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 Anticonception Manual of the Gynecology and Obstetrics Federation of 2015. This research was carried out based on the terms "LARCS", "Intrauterine Device (IUD)", "Subcutaneous Implant" and "Complications", selecting the articles published between 2010 and 2022, written in Portuguese, English and Spanish, which reviewed the literature about the general aspects and mechanism of action of each method, as well as the possible adversities arising from its use.

3 RESULTS AND DISCUSSION

Most studies have shown that the complications associated with the use of IUDs at the primary care level include dysmenorrhea and bleeding. Even if rare, complications such as expulsion of the device, Pelvic Inflammatory Disease (PID), ectopic pregnancy and uterine perforations may also occur and require diagnostic confirmation through imaging, especially Transvaginal Ultrasound (USGTV) (TEIXEIRA et al, 2022; GUEDES et al, 2022).

Dysmenorrhea and abnormal uterine bleeding, as previously stated, is one of the main complaints related to the use of Copper IUD in primary care (BARRETO et al; 2022). This condition occurs mainly in the first months after the insertion of the device and refers to the period of adaptation, since the IUD is seen as a foreign body by the woman's organism, generating a local inflammation with release of cytokines and prostaglandins. Such symptomatology may also be due to the poor positioning of the device inside the uterine cavity (GUEDES et al, 2022).

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

The occurrence of Pelvic Inflammatory Disease occurs in less than 1% of cases due to the pre-existence of endocervicitis (chlamydia and gonorrhea) to the insertion of the device, and curs with pain in the lower belly, fever, fatigue, purulent vaginal discharge, dysuria and dyspareunia. This disease occurs by an inflammatory process of the female upper genital tract secondary to the rise of microorganisms from the uterine cervix to the endometrium, usually due to manipulation of the uterine cavity during the procedure, and may progress to fallopian tubes and peritoneum (FERNANDES et al, 2021; GUEDES et al, 2022).

Uterine or adjacent structures perforations may occur during the IUD insertion process itself, with a clinical picture of abdominal pain and uterine bleeding that requires immediate surgical approach. Although this condition occurs with a frequency ranging from 0.005% to 1.3%, the lack of experience of the professional, a uterus very ante or retroverted, or even the insertion in the immediate postpartum are alert situations (PORTELA et al, 2013; GUEDES et al, 2022).

Another complication resulting from the use of IUD is ectopic pregnancy, which consists in the development of blastocyst outside the uterine cavity, and may occur in the tubes, ovaries, cervical canal and even abdominal cavity. A possible explanation for this relationship is the alteration of the ciliary beat and contractility of the fallopian tubes caused by copper ions, which result in the delay of ovarian transport favor its local installation. It occurs in 2.9 to 8.9% of cases (CAMPOS et al, 2021).

Regarding subcutaneous implants, more mild changes such as amenorrhea or hypermenorrhea, menstrual irregularity, acne, weight gain, mastalgia, nausea and vomiting, decreased libido, dizziness and headache were documented (GOMEZ et al, 2021). Highlighting the change in 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). (BRAGA et al, 2015).

Tabela 1. Intercorrências em usuárias do Dispositivo Intrauterino (DIU)

Intercorrências	Porcentagem
Dores e Sangramentos	10 a 25%
Gravidez Ectópica	2,9 a 8,9%
Perfurações	0,005 a 1,3%
DIP	< 1%

Tabela 2. Intercorrências em usuárias do Implante Subcutâneo

Intercorrências	Porcentagem
Irregularidade Menstrual	61%
Amenorreia	39%
Cefaleia	36%
Aumento de peso	35%
Tontura	25%
Náuseas e Vômitos	21%
Acne	16%
Mastalgia	14%
Diminuição do peso	4%
Diminuição da libido	2%
Dores no local da aplicação	2%

Translation:

Table 1. Intercurrence in users of the intrauterine device (IUD)

Intercorrências (Complications)

Porcentagem (percentage)

dores e sangramentos (pain and bleeding)

gravidez ectópica (ectopic pregnancy)

Perfurações (perforations)

DIP

Table 2. Intercurrence in subcutaneous implant users

Intercorrências (Complications)

Porcentagem (percentage)

Amenorreia

Cefaleia

Aumento de peso

Tontura

Náuseas e vômitos

Acne

Mastalgia

Diminuição de peso

Diminuição de libido

Dores no local de aplicação

amenorrhea

headache

Weight gain

Dizziness

nausea and vomiting

Acne

mastalgia

weight loss

Decreased libido

Pain at the application site

4 CONCLUSION

Thus, according to the evidence collected and the emerging need for effective and safe contraception for reproductive planning purposes, the superiority of LARCS is notorious, since, despite the potential for severe complications, its occurrence was insignificant. For this reason, the training of health professionals to guide the mechanism of action, reversibility, effectiveness, adverse effects and non-contraceptive benefits, in addition to gynecological follow-up after the adoption of the method, are of paramount importance to ensure a better management of adversities, thus ensuring success in the choice.

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