

DISORDERS ASSOCIATED WITH THE USE OF ORAL HORMONAL CONTRACEPTIVES IN WOMEN HORMONAL CONTRACEPTIVES IN WOMEN

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ABSTRACT

Oral hormonal contraceptives are widely used as the primary method of preventing unwanted pregnancy and controlling premenstrual symptoms. Because it is a reversible and easily accessible method, available free of charge through the Unified Health System (SUS), it has become popular among women. However, it should be noted that indiscriminate use of these contraceptives can cause many side effects and adverse reactions ranging from mild symptoms, such as headache, fatigue, and nausea, to more serious effects, such as an increased risk of metabolic and cardiovascular disorders and the development of tumors. Thus, this study aims to investigate the main disorders associated with long-term use of oral hormonal contraceptives. This is a literature review conducted in the Google Scholar, Scielo, MEDLINE, and LILACS databases, focusing on the impacts of these contraceptives on women. The purpose is to promote reflection on the most common undesirable effects resulting from the use of oral hormonal contraceptives, presenting their formulation and examining how the subject is addressed at the beginning of the menstrual cycle and, consequently, throughout women's adult lives and its ramifications. This would provide information for both women who use the medication and health professionals to assist in deciding which contraceptive method to adopt.

Keywords: contraceptive; hormone; women; side effects.

INTRODUCTION

The development of oral hormonal contraceptives has given women freedom of choice in family planning, allowing them to choose the ideal time to become pregnant. This benefit, in addition to accessibility and high effectiveness, has made this type of contraceptive the most used contraceptive method in Brazil. However, caution is needed when using this method, as it is a drug composed of synthetic hormones and its use without professional supervision can lead to long-term health problems (Oliveira; Trevisan, 2021; Santos et al., 2020).

The menstrual cycle is a fundamental biological process in women's reproductive life, characterized by a series of physiological changes that occur cyclically in the female reproductive system. The cycle, which usually lasts between 21 and 38 days, is determined by changes in

hormone levels and reproductive structures during the follicular, ovulatory, and luteal phases, preparing the female body for pregnancy (Moreira et al., 2022).

Strictly speaking, oral hormonal contraceptives may contain synthetic estrogen substances or be combined with other progesterone-like substances. Both formulations act on the pituitary gland and hypothalamus, generating a negative feedback mechanism to reduce the release of LH and FSH hormones, with the aim of inhibiting ovulation and preventing pregnancy (Hasegawa et al., 2022).

Hormonal changes during the menstrual cycle due to oral contraceptive use not only affect the effectiveness of the method, but can also cause several long-term problems for women. Increased estrogen levels can lead to metabolic and cardiovascular complications, which impact blood fat levels and increase the risk of venous clots (Couto et al., 2020).

Therefore, it is crucial to understand how contraceptives will act in a woman's body and what side effects may be caused by prolonged use of this drug. Thus, it is legitimate to ask: What are the main disorders associated with the use of oral hormonal contraceptives in women's long-term health, considering aspects such as coagulation factors, metabolism, and risk of developing neoplasms?

The relevance of oral contraceptives for the reproductive health of women who choose this form of prevention due to its easy accessibility is undeniable. However, it is essential to disseminate reliable information about these oral contraceptives, taking into account the profile and needs of users, in order to reduce long-term risks. In view of the question raised, the main objective of this study was to investigate the main disorders related to the use of oral hormonal contraceptives.

MATERIALS AND METHODS

This exploratory study reviewed scientific articles on female oral hormonal contraceptives. The research adopted as inclusion criteria articles available in full in the Google Scholar,

SciELO, MEDLINE, and LILACS, published in Portuguese and English between 2019 and 2024, excluding those on non-oral contraceptives, non-free contraceptives, available only in abstract form, or outside the study period. Data were collected through searches using specific terms such as: “disorders,” “adverse effects,” “women,” “oral contraceptives,” and “contraceptives,” evaluating articles within the inclusion criteria.

RESULTS (PARTIAL)

Based on the biological principle of MC, oral hormonal contraceptives contain synthetic substances that resemble natural female hormones, such as progesterone and estrogen, and may be formulated with both substances, called combined oral hormonal contraceptives, or with only one substance with effects similar to those of progesterone, called minipills (Souza *et al.*, 2022).

These synthetic hormones act on the pituitary gland, the hypophysis, with negative feedback, suppressing the production of FSH and LH, with the main objective of inhibiting ovulation, reducing the chances of pregnancy through anovulatory cycles, causing the development of the proliferative endometrium, but without the production of the corpus luteum (Gondim; Almeida; Passos, 2022; Hasegawa *et al.*, 2022).

Oral contraceptives are classified as monophasic, biphasic, and triphasic. Monophasic contraceptives may contain 21, 24, or 28 tablets with the same dosage, requiring a 7-day, 4-day, or no break at the end of the pack, respectively. Biphasic and triphasic contraceptives may have the same composition but change the amount of hormone during the pill cycle. It is worth noting that the contraceptive effectiveness rate is linked to discipline in its use, daily pill intake at the same time, and the length of any break in use (Moreira *et al.*, 2022).

The use of contraceptives not only prevents unplanned pregnancies, but also helps control premenstrual symptoms, cramps, and menstrual flow, and can be prescribed as a treatment for conditions such as acne, polycystic ovary syndrome (PCOS), and endometriosis. However, the occurrence of side effects and misinformation about its use lead to discontinuation of the method

method, directly impacting its pharmacodynamic performance (Alves et al., 2022; Moreira et al., 2022).

Shortly after first use, some side effects of birth control include headache, fatigue, nausea, vomiting, mood swings, and decreased libido. In addition, there are several disorders that can arise in the long term, such as metabolic changes in lipid and vascular profiles (Couto et al., 2020).

Exogenous estrogen, a hormone frequently used in the composition of second-generation birth control pills, is related to these thromboembolic conditions. High levels of ethinyl estradiol (EE) associated with progestogens in the body can then intensify the risks and have a prothrombotic action, altering coagulation mechanisms, increasing prothrombin elevation and decreasing antithrombin II, the main plasma proteins in the conversion of fibrinogen to fibrin, favoring the formation of clots (Santos et al., 2021; Ferreira and Paixão, 2021).

The concentration of each hormone in combined hormonal contraceptives can alter lipid metabolism, since the use of progestogens can increase low-density lipoproteins (LDL) and decrease the concentration of high-density lipoproteins (HDL) and triglyceride levels, while EE may have antagonistic effects and contribute to a decrease in LDL and an increase in HDL (Carrias et al., 2019).

CONCLUSION

The use of oral hormonal contraceptives represents a significant advance in reproductive health, providing women with greater control over family planning and the treatment of various gynecological conditions. However, the adverse effects associated with these drugs, such as cardiovascular changes, thromboembolic risks, and changes in the lipid profile, highlight the importance of continuous and individualized medical monitoring. The impact of synthetic hormones, especially exogenous estrogen, highlights the need for careful and informed choices regarding the type and composition of contraceptives. In addition, adherence to the disciplined use of these drugs is crucial to ensure

their effectiveness and minimize health risks. Thus, the dissemination of accurate information and guidance by health professionals are essential to maximize the benefits of oral hormonal contraceptives, balancing contraceptive advantages with careful management of possible long-term side effects.

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