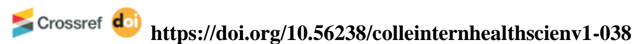
Chapter 38

Implications of continuous hormonal contraception in the menstrual cycle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1 INTRODUCTION

In the 1960s, the advent of the "pill" was a major milestone in women's history and in world scientific history. The oral combined hormonal contraceptive (AHCO) or birth control pill was one of the first forms of hormonal contraception, made from the combination of the new progestin, norethinodrel, and synthetic estrogen. With this, women all over the world routinely introduced the hormonal drugs in doses in order to avoid unplanned pregnancy, a factor that enabled greater control over the reproductive future and a turnaround in the concept of sexuality; after all, reproduction could become a desired biological phenomenon and not a fatality. From the advance of medicine and, consequently, a better determination of etiopathogenies, contraceptives have also started to be used in the treatment of some pathologies, such as: Endometriosis, Adenomyosis and management of the discomfort brought about by the menstrual cycle. Currently, the main representatives are the combined contraceptives of estrogen and progesterone and the progestogens, which can be administered either orally or injected. Their continuous use, especially when prolonged, causes changes in a woman's menstrual cycle, and is not indicated for certain groups of patients. The study about this topic also raises awareness about the subject for the development of new policies and educational programs, including the medical curriculum, in order to discuss the main implications of continuous hormonal contraception in the cycle, as well as the adherence of such methods by patients.

2 METHODOLOGY

To achieve the proposed objectives and test the formulated hypotheses, the study consists of a literature review on the "Implications of Continuous Hormonal Contraception in the Menstrual Cycle" in which articles were selected in the Pubmed and Scielo databases, with the following descriptors Mesh and DeCs: "Menstrual Cycle"; "Hormonal Contraception", reaching a total of 442 articles, after analysis 5 articles were selected - 2 systematic reviews, 1 multicenter study, 1 cross-sectional study and 1 randomized study. The strategy for selection of articles followed the following steps: search of the selected databases, reading of the titles of all articles found and exclusion of those that did not address the subject, critical analysis of the abstracts of the articles and full review of the articles selected in the previous steps. After careful reading of the publications, 437 articles were not used due to the exclusion criteria. Thus, a total of 5 scientific articles were selected for the integrative literature review, with the descriptors presented above. After this selection, we filtered for articles with a time frame between the years 2015 and 2020 and for articles in Portuguese, English, and Spanish. There was no conflict of interest on the part of the authors.

3 DISCUSSION

The implications observed in the menstrual cycle fall into three categories: cycle control (prioritizing regularity), amenorrhea, and prolonged bleeding. Often this bleeding occurs between normal menstrual periods and it is believed that this intermenstrual bleeding is associated with a change in the endometrium that is relatively thickened into atrophic and formation of superficial blood vessels, which become dilated, spiraled, and disaggregated, which predisposes the occurrence of focal bleeding. The results found in combined injectable contraception and combined oral contraception are: 26.6% of women had profuse bleeding during the first year of contraceptive use but this number gradually decreased in the following two years; 81.3% of women had cycle control. Further, in studies with short-term oral progestative contraception (3 months of use) a change in menstrual pattern was observed in ⅓ of the cases, with bleeding in 10% of the cases; and with injectables more than 35% are amenorrheic after 3 months. In the long term we analyzed a pattern of 10-20% of amenorrheic women and 10-40% had irregular bleeding with oral and subcutaneous administration route and 70% of amenorrheic women using injectable route. In the use of levonorgestrel intrauterine device, there was a reduction in bleeding in 90% of women, and 65% were amenorrheic at the end of the first year. In a study using segesterone acetate and ethinyl estradiol vaginal contraceptive system, only 1.8% of women had unacceptable bleeding, leading to discontinuation of the drug. Moreover, it is noted that changes in menstrual bleeding induced by contraceptives are the main causes of dissatisfaction and discontinuation of treatment by patients, and in America and Europe there is a tendency to prefer amenorrhea. Although the majority (65%) of the women in Brazil have the preference for the amenorrhea, this is not a world consensus, in many countries the regular menstruation is seen as a

symbol of health and fertility, besides a guarantee of not being pregnant, being like this, the amenorrhea is seen as a side effect not desired.

A cross-sectional study by ESPINOSA et. al. evaluated the lipid profile of patients using injectable combined contraception (norethisterone enanthate 50 mg/ml + estradiol valerate 5 mg/ml) over three years, demonstrating that the total cholesterol/HDL-cholesterol ratio showed a tendency to fall from the first year of use of the drug. It was also observed that prolonged bleeding tended to decrease gradually with the application of the product over the 3 years of follow-up, as well as evaluating the regularity of the menstrual cycle, which occurred in 81.3% of all patients at the end of the study and amenorrhea was a rare side effect of the medication. Other parameters were also evaluated, resulting in weight gain occurred in 20% of all patients after 3 years of treatment, headache and changes in skin pigmentation followed in order of frequency as side or adverse effects encountered.

A perceived concern among patients in recent times is the risk of venous thromboembolisms from the continued use of hormones, Heikinheimo et. al. found an increased risk of thromboembolism associated with the use of ethinylestradiol in combined forms, although this increase was subtle. The study also suggests that the use of progestogen-only contraception would not be associated with thromboembolic events.

4 CONCLUSION

The results about the implications of continuous hormonal contraception in the menstrual cycle showed low rate of prolonged bleeding, being effective in controlling the menstrual cycle, thus being a tolerable method. Furthermore, the study pointed out the levonorgestrel intrauterine device as the method with the lowest rate of intermenstrual bleeding. Therefore, it should be emphasized the importance of individual analysis of each patient, while, during the choice of hormonal contraceptive method, the patient is informed about the expected bleeding pattern and thus account for their preferences, and their comfort, and include it in the choice of the method, offering a complete picture of the benefits and harms of the respective methods for a conscious decision. Finally, it is recommended the follow-up and gynecological reassessment, if necessary, of the chosen contraception, reassuring and guiding the patient to avoid a possible discontinuation of the chosen method on her own. Moreover, one must take into consideration the clinic, each patient's choice and her adaptation, since changes in the menstrual pattern are the main causes of negligence with the chosen method.

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