

PREVALENCE OF SIDE EFFECTS FROM ORAL CONTRACEPTIVE USE AMONG MEDICAL STUDENTS AT A PRIVATE INSTITUTION

PREVALÊNCIA DOS EFEITOS COLATERAIS PELO USO DE ANTICONCEPCIONAIS ORAIS EM ESTUDANTES DE MEDICINA DE UMA INSTITUIÇÃO PRIVADA

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ABSTRACT

Contraceptive methods (CM) are increasingly being used, with emphasis on male condoms and oral contraceptives (OC). However, no article was found that addressed the frequency in students in this academic environment. The purpose of this study was to investigate the side effects prevalence of OC use in women studying at the Olinda Medical School (FMO). The study is cross-sectional, prospective, observational and descriptive. The sample was probabilistic and randomized considering the number of academics, which is currently 347. Thus, included 90 medical students using OC. Data collection was performed in October 2018, through a questionnaire consisting of 19 closed and open epidemiological questions regarding the use of adverse effects from OC. The parameters of the qualitative variables were expressed by their absolute and relative frequencies. The project was approved by the FMO ethics committee. It was observed 35 (31.5%) academic who presented side effects. Of these, 29 (82.9%) had more than one side effect. Among these, the most frequent were: headache, water retention and weight gain. The findings show the frequency of side effects in FMO medical students within the confidence interval reported in the literature.

Keywords: Contraceptives; Side effects; Medical students

RESUMO

Os métodos anticoncepcionais vêm sendo cada dia mais utilizados, destacando-se a camisinha masculina e o anticoncepcional oral (ACO). Todavia, não foi encontrado artigo que abordasse essa frequência em estudantes neste ambiente acadêmico. O objetivo do estudo foi investigar a prevalência dos efeitos colaterais do uso de anticoncepcionais orais em mulheres que estudam na Faculdade de Medicina de Olinda (FMO). O estudo é transversal, prospectivo, observacional e descritivo. A amostra foi probabilística e randomizada considerando o número de acadêmicas, que atualmente é de 347, assim foram incluídas 90 usuárias de ACO. A coleta de dados foi realizada em outubro de 2018, através de questionário constando de 19 perguntas fechadas e abertas, de natureza epidemiológica, referente ao uso e efeitos adversos do ACO. Os parâmetros das variáveis qualitativas foram expressos por suas frequências absoluta e relativa. O projeto foi aprovado pelo comitê de ética da FMO. Foram observadas 35 (31,5%) acadêmicas que apresentaram efeitos colaterais. Destas, 29 (82,9%) apresentaram mais de um efeito colateral. Entre estes, os mais frequentes foram: cefaleia, retenção hídrica e ganho de peso. Os achados evidenciam a frequência de efeitos colaterais em acadêmicas de medicina da FMO dentro do intervalo de confiança relatado na literatura.

Palavras-chave: Anticoncepcionais; Efeitos colaterais; Estudantes de Medicina

INTRODUCTION

Contraceptive methods are increasingly used worldwide¹⁻¹⁰. Oral contraceptives (OC) provide sexual freedom to women, enabling reevaluation of social, political, and religious perspectives^{3,7}. Over time, OCs were indicated not only for contrac-

tion; however, their side effects must also be considered^{7,11}.

Side effects constitute a major reason for OC non-use and discontinuation. Other factors include difficulty obtaining medication and proper medication use^{4,11-13}. These effects encompass mood varia-

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tions in medical students, who already demonstrate a high prevalence of stress, anxiety, and depression¹⁴⁻¹⁶.

OC may contain natural (estradiol valerate) or synthetic estrogen (ethinylestradiol [EE]). Current evidence demonstrates that side effects primarily result from EE dosage; thus, OCs are classified by EE content^{1,3,12,17-24}. Appropriate eligibility criteria may prevent side effects from OC use³.

The relationship between OC use and several cancers (uterus, ovary, endometrium, cervix, breast, liver) remains unclear. Evidence suggests preventive and contradictory effects^{12,21,25-28}.

Despite established knowledge regarding OC side effects, previous studies did not investigate this occurrence among Brazilian medical students. This study aimed to determine OC usage frequency among students, identifying potential side effects and clarifying whether they are relevant to academic performance.

METHODS

This was a cross-sectional, prospective, and descriptive study.

The study population encompassed female students from the Faculdade de Medicina de Olinda; the institution had 515 students, of whom 347 (67%) were women. The sample was probabilistic and randomized, considering the current population of 347, with an expected frequency of 10% and a sampling error of 5%. The sample resulted in 212 students.

Women who used OC regularly were included. Exclusion criteria considered students with comorbidities or socioeconomic factors that could result in side effects similar to those of OC, or those using medications that could cause similar side effects or drug interactions.

Data collection was conducted in September 2018 at the Faculdade de Medicina de Olinda using a questionnaire with 19 closed and open questions regarding OC use and side effects in the last four months.

The questionnaire assessed whether students used OC, age, weight, height, smoking status, reason for contraceptive use, contraceptive type and duration of use, regularity of use, occurrence and nature of side effects, previous contraceptive use and duration, contraceptive causing most side effects, family history of gynecological cancer, interference with

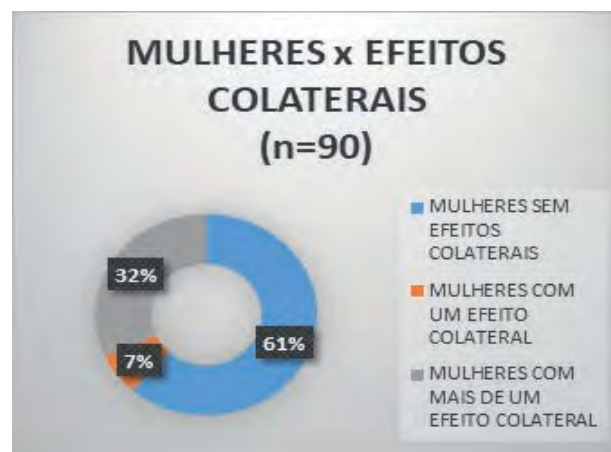
university routine, changes after college enrollment, and whether benefits outweighed side effects.

The study was approved by the research ethics committee of the Faculdade de Medicina de Olinda (no. 2,952,139). Participants signed informed consent forms ensuring that data would be used specifically for this study, maintaining their confidentiality and the ethical integrity of the study. Participant autonomy was not hindered.

RESULTS AND DISCUSSION

The study included 212 women from FMO; 58% did not use OC, and 42% used them. The sample age ranged from 18 to 35 years, with OC use most prevalent among women aged 20 to 24 years (56%), followed by ages 25 to 29 (19%), under 20 years (13%), and over 30 years (12%).

Graph 1 demonstrates that among the interviewed women, 29 reported multiple side effects, 6 experienced a single side effect, and 55 had no side effects.



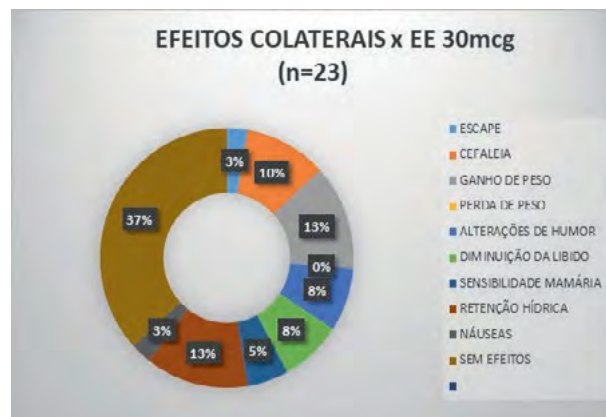
Graph 1. Side effects among the study sample.

Graph 2 shows the frequency of reasons that led students to OC use: contraception, polycystic ovary syndrome, heavy menstrual flow, irregular menstrual cycle, acne, ovarian cyst, hirsutism, premenstrual dysphoric disorder, dysmenorrhea, candidiasis, endometriosis, and adenomyosis.

Of the 90 women using OC, contraception was the primary reason, despite the other applications of the method.



Graph 2. Reasons for OC use.



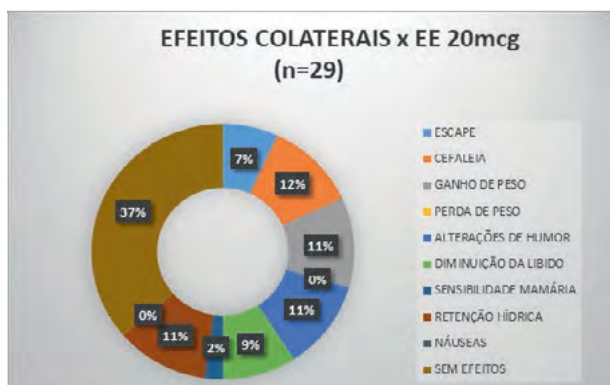
Graph 4. Side effects among 23 students using OC with 30 mcg EE.

Side effects are closely related to EE dosage and include headache, mood changes, weight gain, fluid retention, decreased libido, breakthrough bleeding, and breast tenderness^{1,3,12,17-24}. Among FMO students using OC, the side effects occurred only at EE dosage ≥ 20 mcg; none of the four women using 15 mcg of EE experienced side effects.

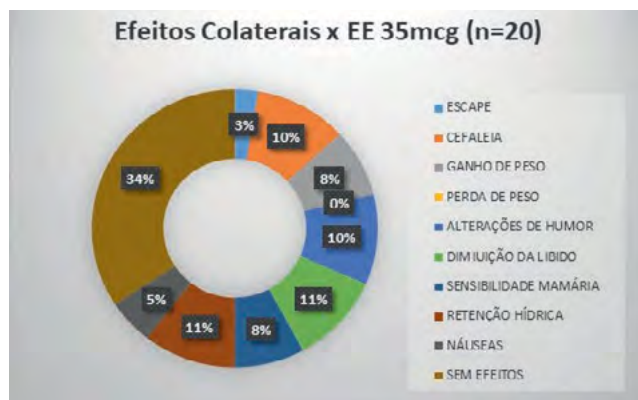
Graph 3 shows the main side effects among the 29 students using OC with 20 mcg of EE; 37% reported no side effects. The most prevalent side effects were headache, weight gain, mood changes, and fluid retention. Weight loss and nausea were not reported.

Graph 5 shows the frequencies of 20 OC users with 35 mcg EE dosage; 34% experienced no side effects. The most prevalent side effects were decreased libido and fluid retention; weight loss was not identified.

Among OC users with pure estradiol, 20% experienced no side effects. The most prevalent effects were headache, breakthrough bleeding, mood changes, and decreased libido. Weight loss, breast tenderness, and nausea were not observed.

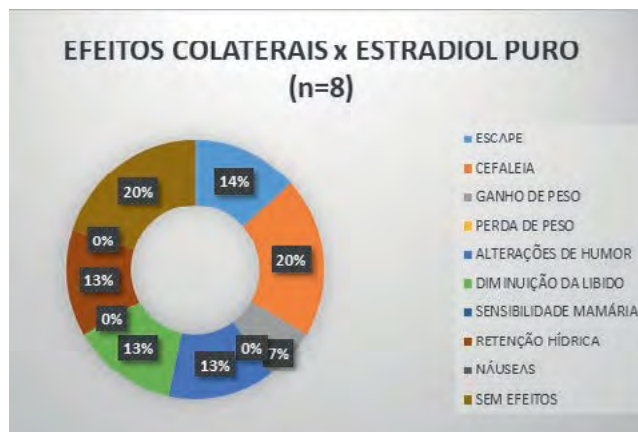


Graph 3. Side effects among 29 students using OC with 20 mcg of EE.



Graph 5. Side effects in 20 users of OC with 35 mcg of EE.

Graph 4 shows the frequency of side effects among 23 students using OC with 30 mcg of EE; 37% experienced no side effects. The most prevalent side effects were fluid retention and weight gain; weight loss was not observed.



Graph 6. Side effects in estradiol users.

This study analyzed the prevalence of effects

according to the type of progestogen used in each OC: drospirenone, desogestrel, gestodene, cyproterone acetate, chlormadinone, dienogest, progestogen, norgestrel, and levonorgestrel.

Among 37 drospirenone users, 41% reported no side effects; weight gain was the most prevalent side effect, followed by headache and decreased libido.

Among seven women using desogestrel, 25% experienced weight gain and 25% experienced fluid retention.

Six of seven students using OC with gestodene had no side effects; mood alteration was the only reported effect.

Among 20 women using chlormadinone acetate, 35% reported no side effects; however, headache (11%), fluid retention (11%), mood alteration (11%), and decreased libido (11%) were reported.

Among six students using chlormadinone, five complained of fluid retention and mood alteration.

Among seven women using dienogest, three had no side effects, and three presented headaches.

Of the three students using norgestrel, two presented no complaints, and one experienced weight gain and fluid retention. Two students using levonorgestrel reported no side effects.

Among six users of pure progestogen, four reported no side effects; one reported weight gain, and one reported mood alteration.

Regarding risks and benefits, 88% agreed that OC benefits outweighed the risks.

Regarding the impact of side effects on academic life in medical school, only 11% reported reduced performance.

CONCLUSION

Although OC was one of the main contraceptive methods used, more than half of the sample used alternative contraceptive methods.

Regarding side effects, which correlated with EE dosage, 15 mcg formulations caused no effects in students. Among those using higher EE dosages commercially available, most reported no side effects. Students using pure estradiol experienced headache as the primary side effect.

Different progestogens in OC produced varied complaints, with fluid retention and weight gain being most prevalent.

Most interviewees reported that benefits outweighed side effects when present. Only 11% experienced worsening of side effects after entering medical school.

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