EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE

EUROPEAN JOURNAL OF
MODERN MEDICINE AND PRACTICE
Vol. 5 No. 10 (Oct - 2025) EJMMP ISSN: 2795-921X

http://innovatus.es/index.php/ejmmp

Knowledge and Current Practice of Oral Contraceptives Utilization and its Interaction With Other Medications in Women in Diyala Province

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Abstract: *Married women frequently use contraceptives, and the majority of them do so without a doctor's advice. According to this study, many women use contraceptives without a prescription or advice from a doctor or pharmacist, which can lead to a number of negative health repercussions. A study of the harm, symptoms, and illnesses that women experience after using contraceptives is part of it.*
Key words: Contraceptive methods, Hormonal contraceptives, Health system, Hormones, Women's health

Introduction

Oral contraceptive pills are widely used and are generally safe and effective for many women. oral contraceptive tablets contain hormonal compounds that a woman consumes to prevent unplanned pregnancy. These pills are separated into two sections, one containing simply the hormone progesterone and the other containing a complex including both progesterone and estrogen(1) The World Health Organization has developed a risk classification system to help physicians advise patients about the safety of oral contraceptive pills(2),but In fact COCs could induce adverse effects,most of them not serious but some which can be life threatening. The most seriousrisks associated with pill use include blood clots and venous thromboembolism, cerebral stroke, and heart attacks . These risks are increased in users who smoke, especially over age 35(3) combined oral contraceptives were linked with substantial adverse efects and increased cardiovascular risks in spite of being highly efective. Without causing any concessions in the efectivenes, improvements in acceptability and safety have been made, mainly by causing a reduction in the dos ages and the development of several new progesterone: 14% of women use them for non- contraceptive purposes, such as managing menstrual disorders and related conditions, including migraines, uterine fibroids, irregular menstruation, endometriosis-associated pain(4) Worldwide, approximately 121 million unintended pregnancies occur each year in women aged 15–49 years, of which 73 million of these will end in abortion(5): agree that the diffusion of modern contraception has certainly contributed to the reduction in the number of unwanted pregnancies and has also facilitated and favoured the adoption of new (more restrictive) norms for the ideal family size.: Oral Contraceptive Pills (OCPs) are very effective in prevention of pregnancy (1). OCPs are one of the most common methods of contraception in the world. and also reversible: contraceptive method reduces the likelihood of be coming pregnant in sexual activity. According to estimates, 99% of women who have ever engaged in sexual activity have used at least one kind of contraception(6). There are three different kinds of

oral contraceptive pills available right now: progesterone- only, continuous, and extended-use tablets. The estrogen and progesterone- containing combination hormonal tablet is the one that is most frequently pre. In Diyala, a governorate in Iraq, the utilization of oral contraceptives and the level of knowledge about their proper use remains under-researched 7

The goal of study

This study aims to assess the knowledge, current practices, and potential medication interactions affecting women using oral contraceptives in Diyalacity.

Subject

The first hormonal pill, called Enovid®, was approved by the Federal Drug Administration (FDA) in May 1960. It contained mestranol and norethisterone. Over the years, oral contraceptives have evolved through gradual lowering of ethinyl estradiol (EE) content, introduction of 17β estradiol, and many different progestins. The standard regimen allows for 21 days of pill containing steroids and a pill-free interval of 7 days. Recently, continuous or extended regimens have been approved. In order to improve compliance, alternative routes of combined oral contraceptive (COC) administration have been developed such as vaginal or transdermal routes.In 2009, according to the United Nations, the mean global percentage using contraception in women who are married or in union was 62.7%. COC represented 8.8% of contraceptive prevalence, reaching 15.4% in more developed countries. More than 100 million women worldwide use COCs. However, each year, many unintended pregEstrogen in COC

Over the years, in order to decrease the cardiovascular risk of the pill, the dose of estrogen has progressively decreased. In the majority of COCs available nowadays, the estrogen component is EE or 17α estradiol. In the 1970s, the dose of EE decreased from 50 to 30–35 μg. Subsequently, formulations containing 20 and even 15 μg were developed. Pills available nowadays are usually sorted into concentrations of EE higher or lower than 30 μg, with pills containing less than 30 μg considered asnancies occur, indicating that contraception still needs to be promoted. Progestins in COCs

In the different combined pills available nowadays, the progestin component in the pill inhibits luteinizing hormone (LH) peak, decreases ovarian sensibility to follicle stimulating hormone (FSH) and therefore decreases estradiol production. The estrogenic component regulates endometrium proliferation and compensates estrogenic deficiency induced by the anti-gonadotropic effect of the progestin. Combination pills are categorized as monophasic, or multiphasic, depending on the different levels of hormones contained in each pill per cycle. The initial pill was monophasic but biphasic and triphasic pills were introduced in the 1980s. They were initially designed to decrease potential side effects, such as nausea and headaches. Here is an explanation of different types of contraception methods, including their effectiveness and the source of their end (i.e., how they work and when they are no longer used):

Here is an explanation of different types of contraception methods, including their effectiveness and the source of their end (i.e., how they work and when they are no longer used):

1. Birth Control Pills:

Type: Pills that contain hormones (estrogen and progestin or just progestin). Effectiveness: 99% effective when used correctly.

Source of End: They are discontinued when a person decides to get pregnant or experiences side effects. After stopping, fertility may return quickly, but it can take a few months for some women.Fig(1)

Fig.1 Birth Control Pills

2. Injectable Contraceptives:

Type: Hormonal injections (typically progestin) given every 3 months. Effectiveness: 99% effective.

Source of End: Discontinued when you decide to get pregnant or if side effects occur. Fertility may take several

months to return after stopping.Fig.(2)

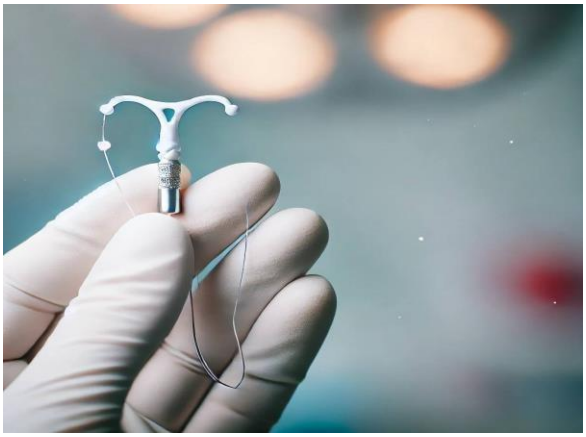
Fig.(2) Injectable Contraceptives

3. IUD (Intrauterine Device):

Type: A small device inserted into the uterus to prevent pregnancy. Can be hormonal (releases progestin) or non-hormonal (copper IUD).

Effectiveness: 99% effective or higher.

Source of End: Removed when you want to become pregnant or at the end of its lifespan (usually 5-1



years).Fig.(3)

Fig.(3) IUD (Intrauterine Device)

4. Implants:(Implanon)

Type: Small rods inserted under the skin of the upper arm that release hormones (usually progestin).

Effectiveness: 99% effective for up to 3 to 5 years.

Source of End: Removed when you wish to get pregnant or after the device's effective lifespan ends (3-5

years).Fig(4)

Fig.(4) ImplantsBirth Control Patch:

Type: A small patch that releases hormones (estrogen and progestin) through the skin to prevent pregnancy.

Effectiveness: 99% effective when used correctly.

Source of End: Replaced every week for three weeks, then one week off. It is discontinued when a person decides to get pregnant.Fig.5

Fig.5 Birth Control Patch

5. Contraceptive Rings (NuvaRing):

Type: A small, flexible ring inserted into the vagina that releases hormones to prevent pregnancy.

Effectiveness: 99% effective when used correctly.

Source of End: Removed after three weeks for one week, then replaced. Discontinued when a person decides to get pregnant.Fig.(6)

Fig.(6) Contraceptive Rings (NuvaRing)

6. Emergency Contraceptive Pills:

Type: Pills taken after unprotected sex to prevent pregnancy. Includes Plan B and Ella.

Effectiveness: Up to 89% effective, but most effective if taken within 72 hours after unprotected sex.

Source of End: Taken as a one-time dose. It doesn't offer long-term contraception and is used as an emergency measure only.Fig.(7)

Fig.(7) Emergency Contraceptive Pills

Each of these methods has its advantages and risks, and the best method depends on personal preferences, health, and lifestyle. It is essential to consult with a healthcare provider to choose the right method. **Methods and materials**

This descriptive study was based on a collection of 40 clinical cases involving women aged between 15 and 49 years, who used various types of oral contraceptive pills (OCPs). These cases were obtained from evening outpatient clinics over a specific period. All cases were collected after obtaining verbal or written informed consent, and no personal identifiers were recorded to maintain patient confidentiality and privacy.

The collected cases were ethically approved for use in academic and educational settings, with the primary goal of enhancing medical understanding and awareness regarding the effects of contraceptive use.

The sample was categorized into two groups:

Group A (20 cases): Women with no prior chronic illnesses who developed adverse effects following the use of OCPs. In most instances, the complications were linked to inappropriate or prolonged use without medical supervision.

Group B (20 cases): Women with pre-existing chronic conditions whose health status deteriorated after initiating contraceptive use. These cases frequently involved the use of OCPs without adequate clinical evaluation or guidance, leading to worsening of their underlying diseases.

This methodology provides a structured approach for understanding the impact of contraceptive pills on different populations and emphasizes the importance of individualized medical assessment before prescribing hormonal contraception.

Table (1

Adverse Effects Observed in Healthy Women After Using Contraceptives		
Variables	Frequency	Percent
Deep Vein Thrombosis (DVT)	4	0.024
D.M	3	0.018
Headache + Migraine	13	0.08
D.Dimer	4	0.024

Premature Ovarian Failure	6	0.036
Development of Ovarian Cysts	7	0.042
breast swelling	7	0.042
CVA ,	2	0.012
the malignant cell	3	0.018
frequent breakthrough bleeding	14	0.084
Increased blood	8	0.048
Irregular menstrual	9	0.054
Irregular bleeding	9	0.054
Swelling and pain in the legs	4	0.024
shortness of breath	6	0.036
Nausea + Vomiting	14	0.084
sensitivity to light	4	0.024
Low Hemoglobin	2	0.012
Hypertension	13	0.078
Mood Disturbance + Insomnia	21	0.135
Elevated Liver Enzymes	3	0.018
Weight Gain	8	0.012
Melasma	3	0.018
Total	167	100%
Mean	4.175	

Table (2)

Chronic Diseases Observed to Worsen Following Contraceptive Use		
Variables	Frequency	Percent
chronic hypertension	1	0.09
DVT (Deep Vein Thromosis)	2	0.18
Breast cancer	1	0.09
RBS	1	0.09
D.M.	1	0.09
Migraine	2	0.18
heart disease (Mitral valve disease)	1	0.09
Epilepsy	1	0.09

Asthma	1	0.09
Total	11	100%
Mean	0.82	

Result & Discussion (Alternative Proposal)

1. Total Number of Cases:
   - Chronic : Only 11 cases.
   - Normal number : 167 cases.

   The increase is very clear, from 11 to 167 cases, indicating a significant impact after the event or intervention, whether positive or negative, depending on the type of outcome.

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2. Diversity of Symptoms/Diseases:
   - Before: Only 8 different health conditions were included.
   - After: More than 20 different health conditions appeared.

   This indicates an increase in the diversity and multiplicity of health problems after the event, indicating a comprehensive impact on the health of those involved.

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3. Most Common Symptoms Normal cases with contraceptive use :
   - Mood Disturbance + Insomnia: 21 cases (0.125%).
   - Headache + Migraine: 13 cases (0.08%).
   - Hypertension (high blood pressure): 13 cases (0.078%).
   - Frequent breakthrough bleeding: 14 cases (0.084%).

   These indicators show that the greatest impact was on the psychological state, nervous system, and circulatory system.

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4. Most common conditions

   Chronic cases with contraceptive useq:
   - DVT (deep vein thrombosis) and migraine: two cases per unit.
   - The remaining cases were rare and evenly distributed (only one case each).

   This means that the health status before the event was relatively stable, with only minor and limited problems.

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5. Change in DVT (deep vein thrombosis):
   - Chronic : 2 cases.
   - Normal : 4 cases.

   Although the increase is not numerically significant, its frequency indicates the recurrence of a serious condition that appeared after the event.

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6. Mean:

•Chronic : 0.82

• Normal : 4,175

This number represents the average frequency of symptoms or conditions in the sample after the event. This indicates a significantly higher frequency compared to Chronic case the event.

— generally

The data indicate that the event or intervention led to a significant deterioration in overall health, whether in terms of the number of people affected, the variety of symptoms, or the severity of the conditions. Health status before the event was more stable, while after the event, new physical and mental health problems appeared at a greater rate.

The findings of this study highlight the importance of understanding the behavioral patterns associated with the use of contraceptive methods, particularly in a community like Diyala, where social and cultural factors significantly influence women's awareness of reproductive health. The study revealed that a considerable number of women use oral contraceptive pills without consulting healthcare professionals, indicating a lack of sufficient health education in this area.

This suggests a gap between theoretical knowledge and actual practice. While some women may be aware of the potential side effects or drug interactions, they often lack the necessary information to make informed decisions regarding the most appropriate contraceptive method, timing, or safety.

Moreover, the results show a growing acceptance of using oral contraceptives for therapeutic purposes, such as regulating menstrual cycles or managingendometriosis symptoms. This reflects the fact that women are not only using these pills for birth control but also as part of their routine health care, further emphasizing the need for clear and updated medical guidance.

The overall average incidence was (4.175), meaning that the person is exposed to an average of four different diseases. This is a negative indicator, as some diseases have negative consequences associated with other diseases (frequent breakthrough bleeding), and the same is true for (deep vein thrombosis).

The ANOVA analysis also showed that there was a difference between individuals before and after taking the treatment, which is a second indicator confirming this. Therefore, we recommend avoiding this treatment and finding a suitable alternative.

Conclusion

The results of this study revealed a significant knowledge gap among women in Diyala regarding the proper use of oral contraceptive pills. A large proportion of them were found to be using these pills without medical or pharmaceutical consultation, exposing themselves to potentially serious health complications.

Based on these findings, the study emphasizes the need to strengthen health education programs targeting women of reproductive age. These programs should focus on proper usage, understanding the different types of oral contraceptives, their risks, and possible drug interactions. The study also recommends involving healthcare professionals and pharmacists in ongoing awareness campaigns to ensure the safe and effective use of these contraceptives—ultimately contributing to women's health and the success of family planning initiatives.

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