

**Khamdamova M.T.**

**Bukhara Medical University named after Abu Ali Ibn Sina. Uzbekistan.**

[hamdamova.muhayyoxon@bsmi.uz](mailto:hamdamova.muhayyoxon@bsmi.uz)

**Аннотация.** After 3 years or more of wearing the IUD (Group 3), the duration of menstruation in patients, as in Groups 1 and 2, significantly increases, and no significant differences were noted in the percentage of occurrence between the groups. No significant differences were noted between Groups 2 and 3 in the detection of cases of pain, scanty discharge, frequent, heavy discharge, and an increase in the volume of menstruation. The depth of differences in the percentage of pain, volume of discharge, and scanty discharge compared to the parameters of Group 1 became even more noticeable, and cases of frequent, heavy discharge also increased.

**Keywords:** contraception, gynecology, IUD, medical abortion.

**Relevance.** The problem of contraception, which has provided effective birth control in recent decades, remains one of the most pressing issues in gynecology.

According to the classical definition of WHO, family regulation is ensuring control over the reproductive function to give birth to only wanted children. Currently, obstetricians and gynecologists have a large arsenal of contraceptives at their disposal, allowing them to preserve women's reproductive health.

The use of effective contraceptives reduces morbidity and mortality primarily by reducing the number of unwanted pregnancies and births, allowing them to follow the rules: not to give birth too early - before the age of 18, too late - after the age of 35, too many - more than 4 and too often - from 3 to 18 months interval between birth and conception [1].

The use of contraception to give birth to only wanted children should be considered as a woman's inalienable right to preserve her health, the health of her current and future children. From 36 to 53 million abortions are performed annually in the world, i.e. every year 4% of women of childbearing age undergo this surgical intervention [2]. Prevention of pregnancy in women under 19 and over 35, as well as maintaining an interval between births of at least 2-2.5 years reduces maternal and child mortality by more than 2 times. Contraception helps reduce the impact of an important negative factor in women's reproductive health - the number of abortions. Complications of medical abortion account for 20% of the causes of maternal mortality [1]. In general, the frequency of early, delayed and remote complications after abortion ranges from 16 to 52% [3]. A short interval between pregnancies has a negative impact on the health of the newborn and the mother, increasing the frequency of premature births, low birth weight babies, early neonatal and infant mortality [2]. This relationship is primarily due to the incomplete recovery of the mother's body from the stress of childbirth and the lack of vital substances in her body. In this regard, contraception is of paramount importance for maintaining the general and reproductive health of a woman. Among the various methods of preventing unwanted pregnancy, intrauterine contraception (IUC) is the most popular. According to WHO, it is used by more than 60 million women. In the United States, 77.9-89.9% of women resort to postpartum contraception [1]. In the Russian Federation, this figure is 22.9% [1,21,22,23,24,25,26,27,28].

## THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

### VOLUME-5, ISSUE-2

Many researchers believe that intrauterine contraceptives (IUC) are the method of choice for nursing women who have no contraindications to their use [1,8,9,10,11,12,13,14].

Among women of reproductive age, these methods remain the most popular method of contraception in many countries in Asia, the Middle East and Latin America. In terms of the absolute number of users, China leads - 49.0%, Tajikistan - 68.9% [1] and Uzbekistan - 46.0% [2], while in Russia it is slightly lower - 22.9% [1,29,30,31]. In 2009, 46.1% of women of reproductive age used a copper-containing intrauterine contraceptive in Uzbekistan [1,15,16,17,18,19,20]. The IUD remains in the leading position in terms of demand. This is due to its high efficiency, the absence of a systemic effect on the woman's body, rapid restoration of fertility after the IUD is removed, which is important, its availability to any women of fertile age, the absence of a connection with sexual intercourse and the need for daily monitoring of use, which is mandatory when taking oral contraceptives. At the same time, when using the IUD, side effects and complications develop in the form of expulsion, the development of inflammatory phenomena[[2,34,35,36], menstrual cycle disorders manifested by hyperpolymenorrhea, menometrorrhagia, which are observed in 11-24% of women with IUD [1,32,33,37] and can lead to anemia.

Despite their high efficiency, IUDs are often accompanied by metabolic disorders that can have a negative impact on the hemostasis system and be an important factor in the development of iron deficiency anemia - IDA [1,2,3,4,5,6,7].

Thus, despite the intergenetic interval provided by the IUD, the desired effect is not achieved - preparing women for future childbirth. By the time of the next pregnancy, the woman still has iron deficiency, which worsens during pregnancy. There are conflicting opinions on this issue in the literature of recent years.

However, today, despite the obvious disadvantages of using IUDs, practitioners actively offer this method of contraception to women in our region. There is no data in the literature on the timing of prevention or treatment of iron deficiency in women using IUDs depending on the duration of wearing.

**Purpose of the study:** to establish the most significant factors determining the nature of the course, prediction of outcomes depending on the duration of wearing the IUD, the formation of IDA based on clinical, hematological, biochemical studies.

**Research methods.** The examined women had an IUD inserted according to Muthal-Rathore A. [2004], who recommends inserting copper-containing T-shaped IUDs (CuT380A) no later than 48 hours after birth, taking into account the absence of infection and inflammation in the birth canal.

The surveyed women of the main (n=450) and control groups (n=40) kept a diary on the menstrual cycle, pain, amount and shape of discharge, duration and volume of menstruation.

The criteria for inclusion in the main study group were: wearing a copper-containing T-shaped IUD (CuT380A), absence of pelvic inflammatory diseases and cancer, women's age from 20 to 45 years. All ethical principles related to the involvement of women in medical research are based on the Helsinki Declaration of the World Medical Association (Helsinki, 1964, latest amendment, Seoul, 2008).

Of the patients we examined, 341 women (69.6%) were rural residents, and 149 women (30.4%) were urban residents.

By patient groups, this indicator was as follows: Group 1 - 68.0% (n=102) and 32.0% (n=48), respectively; Group 2 - 69.3% (n=104) and 30.7% (n=46), respectively; Group 3 - 71.3% (n=107)

## THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

### VOLUME-5, ISSUE-2

and 28.7% (n=43), respectively; control group - 70.0% (n=28) and 30.0% (n=12). Thus, the representativeness of the groups was fully observed in terms of the women's place of residence.

The overwhelming majority of women - 481 (98.2%) were officially married, only 9 of the examined women (1.8%) were not officially married. According to this indicator, all groups of women were representative.

The data show that the women in the compared groups are in the same age range, mainly between 21 and 43 years old. Age parity in the groups was also maintained, which indicates the reliability of the results obtained in the comparative aspect.

**Results.** The examined women had IUDs inserted according to Muthal-Rathore A. [2004], who recommends inserting copper-containing T-shaped IUDs (CuT380A) no later than 48 hours after childbirth, taking into account the absence of infection and inflammation in the birth canal. The examined women of the main (n=450) and control groups (n=40) kept a diary of the menstrual cycle, pain, amount and form of discharge, duration and volume of menstruation.

The inclusion criteria for the main study group were: wearing a copper-containing T-shaped IUD (CuT380A), the absence of inflammatory diseases of the pelvic organs and oncological diseases, the age of women from 20 to 45 years.

All examined women using an IUD were examined for the nature and duration of menstruation before and after the insertion of the intrauterine contraceptive.

The conducted studies showed that initially in the examined women of group 1 (n=150), the duration of menstruation ranged from 3 to 5 days (on average  $3.8 \pm 0.1$  days). Of these, 114 (76.0%) had menstruation lasting up to 4 days, 25 (16.7%) women had menstruation lasting 4-5 days, and 11 (7.3%) patients had menstruation lasting 6-7 days.

After inserting the IUD, menstruation lasted 4-5 days in 6.7% of women, extended to 6-7 days in 88.6% of women, and extended to 8 days or more in 4.7% of women. In this case, pain appeared in 2.7% of cases, discharge appeared in 67.3% of cases (n=86), and the volume of menstruation increased in 48.7% of cases (n=73), especially by the end of the first year of wearing the IUD. Frequent, heavy discharge was not observed. Thus, within 1 year after insertion of the IUD (Group 1), the examined women experienced a significant increase in the duration of menstruation ( $P < 0.001$ ), pain (2.7%), discharge (67.3%), and an increase in the volume of menstruation (48.7%), which were absent before insertion of the IUD.

In the examined women of the 2nd group, the duration of menstruation ranged from 3 to 8 days (on average  $4.0 \pm 0.1$  days). Of these, in 108 (72.0%) up to 4 days, in 24 (16.0%) 4-5 days, and in the remaining 18 (12.0%) women, the duration of menstruation was 6-7 days.

2-3 years after the insertion of the IUD, the duration of menstruation remained at 4-5 days in 15 (10.0%) women, extended to 6-7 days in 120 (80.0%) women, and in the remaining 15 (10.0%) patients up to 8 days or more. In this case, pain appeared in 4.0% of cases (n=6), scanty discharge in 10.0% of cases (n=15), frequent, heavy discharge in 69.3% of cases (n=104), and the volume of menstruation increased in 59.3% of cases (n=89).

Thus, during 2-3 years of wearing the IUD (Group 2), the duration of menstruation in the examined women, as well as in patients of Group 1, significantly increases ( $P < 0.001$ ), pain (4.0%), discharge (10.0%), frequent, heavy discharge (69.3%) appear, and the volume of menstruation increases (59.3%), which were absent before insertion of the IUD. Unlike Group 1, the severity of the above symptoms is higher in women of Group 2.

In the examined women of Group 3, the duration of menstruation ranged from 3 to 8 days (on average  $3.8 \pm 0.1$  days). Of these, 123 (82.0%) women had a period of up to 4 days (3-4 days), 15 (10.0%) patients had a period of 4-5 days, and 12 (8.0%) women had a period of 6-7 days.

**Conclusion:** 1. Within 1 year after inserting the IUD (Group 1), the subjects showed a significant increase in the duration of menstruation, pain, scanty discharge, and an increase in the volume of menstruation, which were absent before inserting the IUD.

2. Within 2-3 years of wearing the IUD (Group 2), women, like patients in Group 1, showed a significant increase in the duration of menstruation, pain, scanty discharge, frequent, heavy discharge, and an increase in the volume of menstruation. Unlike Group 1, in Group 2 the percentage of detected pain and discharge volume increases, and frequent, heavy discharge appears during menstruation.

#### Literature

1. Doroney H. F., Interni Hent hypoxia conditioning prevents endothelial dysfunction and improves nitric oxide storage in spontaneously hypertensive rats // *Exp. Biol. Med.*- 2011. – Vol. 36. – P. 867 – 873.

2. Calvert S. W., Cahill I, Yamaguchi – Okava M., Zhang I. H. Oxygen treatment after experimental hypoxia – isolumia in neonatal rats alters the expression of HIF – 1 and its downstream target genes // *J. Appl. Physiol.*-2006. - №101.-P. 853 – 865.

3. Semeza G.L Regulation of Oxygen Homeostasis by Hypoxia – Inducible Factor//*Physiology.* – 2009. - №24. - P.97 – 106.

4. Ferrandina G., Ranelletti F. O., Gallotta V. et al Expression of cyclooxygenase – 2(COX - 2), receptors for estrogen (ER), and progesterone (PR) PS3, ki 67, and neu protein in endometrial cancer //*Gynecol.Oncol.* – 2005. –Vol. 98. - P.383 – 389.

5. Khamdamov I.B. Clinical evaluation of the effectiveness of the traditional approach to the treatment of hernias of the anterior abdominal wall in women of fertile age // *Doctor's Bulletin.* – Samarkand 2022. No. 2.2 (104).-P.65-70.

6. Khamdamov I.B., Mirkhodzhaev I.A. Khakimov M.Sh. Khamdamov B.Z. Evolution of the use of polymer implants for hernioplasty // *Tibbiyotda Yangi kun.* – Tashkent; 2021,- No. 2 (34) P.-107-111.

7. Khamdamov I.B., Khamdamov A.B. Differentiated approach to the choice of hernioplasty method in women of fertile age (Clinical and experimental study) // *Tibbiyotda Yangi kun.* – Bukhoro, 2021.- No. 6 (38/1).-P. 112-114.

8. Khamdamov I.B., Khamdamov A.B. Fertil yoshdagi ayollarda endovideo surgeon hernioplasty // *Tibbiyotda yangi kun.* Bukhoro, 2021.-№6 (38/1) -S. 25-27.

10. Khamdamov I.B. Experimental determination of the extensibility of the anterior abdominal wall tissues at different times of pregnancy using various approaches to hernioplasty // *Academicia: An International Multidisciplinary Research Journal* Vol. 12, Issue 04, April 2022 SJIF 2022 = 8.252 R.193-201 (Scopus).

11. Khamdamov I.B. Improving tactical approaches in the treatment of hernias of the anterior abdominal wall in women of fertile age // *Tibbiyotda Yangi kun.* Bukhoro, 2022.-№10(48)- pp. 338-342.

12. Khamdamov I.B. Morphofunctional features of the abdominal press in women of reproductive age // *Tibbiyotda Yangi kun.* Bukhoro, 2022.-№3(41)- pp. 223-227.

## THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

### VOLUME-5, ISSUE-2

13. Khamdamova M.T. Ultrasound features of three-dimensional echography in assessing the condition of the endometrium and uterine cavity in women of the first period of middle age using intrauterine contraceptives // *Biology va tibbyot muammolari*. - Samarkand, 2020. - No. 2 (118). - P.127-131.
14. Khamdamova M. T. Ultrasound assessment of changes in the endometrium of the uterus in women of the first and second period of middle age when using intrauterine and oral contraceptives // *Биомедицина ва амалиёт журнали*. – Ташкент, 2020. - №2. - 8 часть. - С.79-85.
15. Khamdamova M. T. Anthropometric characteristics of the physical status of women in the first and second period of middle age // *A new day in medicine*. Tashkent, 2020. - № 1 (29). - С.98-100.
16. Khamdamova M.T. Age-related and individual variability of the shape and size of the uterus according to morphological and ultrasound studies // *News of dermatovenereology and reproductive health*. - Tashkent, 2020. - No. 1-2 (88-80). - P.49-52.
17. Khamdamova M. T. Anthropometric characteristics of the physical status of women in the first and second period of middle age // *Тиббиётда янги кун*. Ташкент, 2020. - № 1 (29). - С.98-100.
18. Khamdamova M.T. Age-related and individual variability of the shape and size of the uterus according to morphological and ultrasound studies // *News of dermatovenereology and reproductive health*. - Tashkent, 2020. - No. 1-2 (88-80). - P.49-52.
19. Khamdamova M.T. Ultrasound features of three-dimensional echography in assessing the condition of the endometrium and uterine cavity in women of the first period of middle age using intrauterine contraceptives // *Biology va tibbyot muammolari*. - Samarkand, 2020. - No. 2 (118). - P.127-131.
20. Khamdamova M. T. Ultrasound assessment of changes in the endometrium of the uterus in women of the first and second period of middle age when using intrauterine and oral contraceptives // *Biomedicine va amaliyot journals*. – Tashkent, 2020. - No. 2. - Part 8. - С.79-85.
21. Khamdamova M.T. Features of ultrasound parameters of the uterus in women of the first and second period of middle age using injection contraceptives // *Tibbiyotda yangi kun*. - Tashkent, 2020. - No. 2/1 (29/1). - pp.154-156.
22. Khamdamova M.T. Features of ultrasound images of the uterus and ovaries in women of the second period of middle age using combined oral contraceptives // *Tibbiyotda yangi kun*. - Tashkent, 2020. - No. 2 (30). - pp. 258-261.
23. Khamdamova M.T. Individual variability of the uterus and ovaries in women who use and do not use various types of contraceptives // *Tibbiyotda yangi kun*. - Tashkent, 2020. - No. 3 (31). - pp. 519-526.
24. Khamdamova M. T. Echographic features variability in the size and shape of the uterus and ovaries in women of the second period of adulthood using various contraceptives // *Asian Journal of Multidimensional Research* - 2020. – N9 (5). - P.259-263.
25. Khamdamova M. T. Somatometric characteristics of women of the first and second period of adulthood using different contraceptives with different body types // *The american journal of medical sciences and pharmaceutical research* - 2020. – N8 (2). - P.69-76.
26. Хамдамова М.Т., Жалолдинова М.М., Хамдамов И.Б. Состояние оксида азота в сыворотке крови у больных кожным лейшманиозом // *Тиббиётда янги кун*. - Бухоро, 2023. - № 5 (55). - С. 638-643.
27. Хамдамова М.Т., Жалолдинова М.М., Хамдамов И.Б. Значение церулоплазмينا и меди в сыворотки крови у женщин носящих медьсодержащих внутриматочной спирали // *Тиббиётда янги кун*. - Бухоро, 2023. - № 6 (56). - С. 2-7.

## THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

### VOLUME-5, ISSUE-2

28. Khamdamova M. T. Bleeding when wearing intrauterine contraceptives and their relationship with the nitric oxide system // American journal of pediatric medicine and health sciences Volume 01, Issue 07, 2023 ISSN (E): 2993-2149. P.58-62
29. Khamdamova M. T. The state of local immunity in background diseases of the cervix // Eurasian journal of medical and natural sciences Innovative Academy Research Support Center. Volume 3 Issue 1, January 2023 ISSN 2181-287X P.171-175.
30. Хамдамова М.Т., Хасанова М.Т. Различные механизмы патогенез гиперплазии эндометрия у женщин постменопаузального периода (обзор литературы) // Тиббиётда янги кун. - Бухоро, 2023. - № 8 (58). - С. 103-107.
31. Khamdamova M. T., Khasanova Makhfuza Toyqulovna, Umidova Nigora Nabievna The role of genetic determinants in the occurrence of hyperplastic processes of the reproductive system of women's menopausal age // Journal of Advanced Zoology ISSN: 0253-7214 Volume 44 Issue Special Issue-2 Year 2023 Page 3724:3730
32. Khamdamova M. T. Bleeding when wearing intrauterine contraceptives and their relationship with the nitric oxide system // American journal of pediatric medicine and health sciences Volume 01, Issue 07, 2023 ISSN (E): P. 2993-2149. R.58-62
33. Khamdamova M.T. Reproductive Health of Women Using Copper-Containing Intrauterine Contraception // Eurasian Medical Research Periodical Volume 28 January 2024, ISSN: 2795-7624 .www.geniusjournals.org P. 39-45.
34. Khamdamov I.B. Advantages Of Laparoscopic Hernioplasty in Obesity Women of Fertile Age // Eurasian Medical Research Periodical Volume 28 January 2024, ISSN: 2795-7624 .www.geniusjournals.org P. 33-38.
35. Khamdamova M. T. Bleeding when wearing intrauterine contraceptives and their relationship with the nitric oxide system // American journal of pediatric medicine and health sciences Volume 01, Issue 07, 2023 ISSN (E): P.2993-2149. R.58-62
36. Khamdamova M. T. The state of local immunity in background diseases of the cervix // Eurasian journal of medical and natural sciences Innovative Academy Research Support Center. Volume 3 Issue 1, January 2023 ISSN 2181-287X R.P.171-175.
37. Khamdamova M. T., Khasanova M.T. Genetic mechanisms of development of endometrial hyperplastic processes in women in menopausal age // American Journal of Medicine and Medical Sciences 2025.- №15(2): P.372-375 DOI: 10.5923/j.ajmms. 20251502.22