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Research Article

Features of Practical Use of Different Methods of Contraception in Female Athletes

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Abstract

This research article presents the materials of the study conducted by the author, devoted to the issue of the features of the practical use of modern contraceptives by female athletes of reproductive age, based on many years of practical experience with women who have dedicated themselves to sports. Also considered are issues related to the regulation of female athletes' fertility during their training and competitive activity. Reflected are aspects of reproductive behavior, analyzed the situation with violations of the state of somatic and reproductive health in female athletes. Taking into account the specifics of the use of contraceptives and methods by female athletes, practical recommendations are given for the optimal and safe use of modern methods of fertility regulation.

Keywords: contraception, fertility, reproductive behavior, reproductive health, female athletes

Introduction

In the last decade, modern women's sports have been characterized by a pronounced emancipation. Most men's sports have been transferred to women: football, most types of wrestling and martial arts, boxing, water polo, weightlifting. However, most new women's sports still do not have training methods that are based on the characteristics of the female body, taking into account the cyclical nature of its functions, and, most importantly, the prospect of childbearing [2, 5, 8]. The health of female athletes has always been a priority task for women's sports [2, 5,18]. One of these issues is the relationship between sports and contraception [5, 9, 10]. In our opinion, the experience of using contraceptives by female athletes is insufficiently covered in both specialized medical and sports literature in Russia. But this issue continues to be relevant, on the one hand, as a purely female problem for athletes who are sexually active and, like any woman, need reliable protection from unwanted pregnancy. This is an individual, modern contraception adapted to intensive sports activities and the lifestyle associated with it [5, 9, 10]. On the other hand, in scientific circles, today, there is no consensus on the impact of modern hormonal agents on the body of a female athlete and her athletic performance, not to mention her health, including reproductive health [9, 10]. The issue of choosing the right contraceptive is especially acute for female athletes, since an unplanned pregnancy of an athlete completely disrupts the algorithm of her training and competition process, changes the psychological attitude of the athlete to solve a problem that has unexpectedly arisen in her life [9].

Leading scientists in the field of sports medicine pay great attention to the problems of women's sports, the impact of increasing physical activity on the female body, the issue of an integrated approach to the recovery and rehabilitation of female athletes (Litisevich L.V., 2005; Levenets S.A., Lipovki L.V., 2004; Niauri, D.A., 2001-2003; Shakhlina L.G., 2004-2008). According to Bachinskaya N.V. (2006), only 15% of coaches occasionally take into account the characteristics of the menstrual cycle of female athletes when planning training. Experts in issues of reproductive health in women's sports (Abramov V.V. et al., 2004; Lipovka L.V., 2004; Shakhlina L.G., 2007; Austin TM, 2009) have repeatedly pointed out that the frequency of reproductive disorders among female athletes is higher than in the population, and in some sports, it exceeds 70% (Abramov V.V., 2004; Niauri D.A., 2006). As for the reproductive behavior of female athletes, many of them solve the issue of their fertility by performing an artificial termination of pregnancy. Thus, according to the data provided in her dissertation research by Fazletdinova I.Yu. (2009), 112 athletes were pregnant, of which 98 young women chose the method of termination by medical abortion at 6-7 weeks, and 14 - by surgery (curettage method and/or vacuum abortion). After medical abortion, a control examination with ultrasound diagnostics was carried out after 2 weeks. Expulsion (passage) of the ovum occurred in 97.7% of women. In 2.3%, according to ultrasound data, remnants of the ovum were diagnosed, for which curettage of the uterine cavity was performed in the hospital. In 1% of observations, exacerbation of chronic salpingo-oophoritis with inpatient treatment was diagnosed after 14 days. In one observation, with the surgical method, there was incomplete removal of the ovum with repeated curettage (outcome: recovery) [7].

Considering the age composition of female athletes, high sexual activity, frequency of polygamy, their reproductive age, the onset of pregnancy during their active training and competition cycle is undesirable and it is most often interrupted by various types of medical abortion [2, 5, 7]. It has also been reliably established in a number of studies that many female athletes are characterized by affective and personality disorders caused by training with increased loads, sports competitions and associated stress [2,

8]. Unresolved issues of improving the health of women of childbearing age, insufficiently studied processes of reproductive behavior, contraception, fertility and infertility - this is the range of issues that allow us to consider our work relevant. Unfortunately, the issue of practical application of methods and means of contraception by female athletes has not been fully studied and has many controversial and contradictory discussion points [5, 10].

Firstly, what kind of female athletes are we talking about? We can consider the mass female physical culture movement and the passion of many women of reproductive age for health programs (fitness, stretching, aerobics, yoga, etc.). Naturally, the overwhelming majority of them live an active sexual life, sometimes having several sexual partners and, therefore, need reliable, individually selected modern contraception. Almost all means and types of contraception are acceptable here, both hormonal and non-hormonal [2, 5,10]. If we talk about the use of contraception by female athletes, then by female athletes, in our opinion, we should understand women who are actively and, often, professionally involved in one or another sport, from girls with different categories to champions and prize winners of various competition levels. Here, a number of problems arise that motivate both the athlete herself and her coach and/or sports doctor to take a strictly individual approach to selecting contraceptives for a particular athlete [2, 5, 10]. The list of issues in selecting contraceptives is so large that we would like to focus on the most important, in our opinion, of them. These are: age, sexual activity, absence and/or presence in the anamnesis of pregnancies, children, abortions, miscarriages, extragenital pathology, premorbid background, type of sport (acyclic, cyclic), previous use of any type of contraception, duration and purpose of using a particular type of contraception, absolute and relative contraindications to the use of a contraceptive [3, 4, 10].

Secondly, is the range of contraceptive methods and means for all female athletes the same? And in general, do all female athletes need to use contraceptives? It is no secret that a significant part of professional female athletes has significant and diverse disorders of the menstrual cycle, from hypomenstrual syndrome, with oligo-opso and hypomenorrhea, up to amenorrhea and/or infertility. Naturally, such female athletes do not need reliable modern contraception, but diagnostics and properly selected treatment for the type of reproductive health disorders they have [2, 6, 9]. Thirdly, the choice of a birth control method for adult female athletes is their individual choice, as for any other woman. Nevertheless, an athlete, especially if she is a high-level professional, must take into account additional, both external and internal factors when choosing an individual and adapted method of contraception [2, 3, 10]. If a female athlete has an irregular menstrual cycle and is unable to determine the day of ovulation, but has a relatively normal sex life, then the possibility of an unplanned pregnancy is very high. In this case, the option of determining the days of possible ovulation in a given cycle comes first [6, 8]. And then we are no longer talking about contraception, but about monitoring fertility in a given menstrual cycle.

Aim

The purpose of conducting this study and writing a research article based on its results is to be able to express one's opinion and view on an unsolved problem, a pressing issue in the world of women's sports, about the true state of reproductive health of female athletes of reproductive age and their often-independent decision to use or not use certain contraceptives, as well as when determining one's reproductive behavior and planning one's contraceptive method.

Hypothesis Of the Article

During the preparation period for planning the conduct of this study, the author put forward the following working hypothesis, namely: the overwhelming majority of active female athletes of reproductive age, both in their professional and/or amateur sports, independently and chaotically use a wide variety of contraceptives and determine their own model of reproductive behavior, practically without using the recommendations of their coaching team, including the opinion of their sports doctor. Exceptions to this model of reproductive behavior of female athletes are extremely rare and are controlled only by the athletes themselves. Also, the group of exceptions can include top-class athletes, whose model of reproductive behavior, including contraceptive choice, is strictly controlled by a sports doctor/group of doctors, including a gynecologist, endocrinologist and, sometimes, if necessary, other specialists, as well as their coach or coaching team, especially during important sports performances at a very high level.

Methods And Means of Research

In conducting this study, the author actively used the method of literary-critical analysis of available sources of information, both domestic and foreign, on the issue under study, taking into account the opinions and scientific developments of other authors and specialists in this matter. To conduct the study, in addition to collecting anamnesis and using medical documentation of female athletes, we specially developed an anonymous questionnaire, which includes 45 questions. The questions of the questionnaire concern the characteristics of the menstrual cycle, sexual life of female athletes, sports history, training and competitive activity. Particular attention was paid to the issues of individual use of contraceptive methods and means by athletes. The data obtained as a result of the survey were analyzed and statistically processed. All female athletes who took part in the study conducted by the author gave their voluntary, both oral and written consent to participate in it.

Results Of the Study and Discussion

The study involved 94 female athletes, divided into two groups. The first group (n=46) included athletes who had been actively involved in sports for more than 10 (12±1.5) years in various sports sections of the cities of Novaya Kakhovka, Kakhovka and Berislav, Kherson region. The second group (n=48) included female athletes, members of the national teams of their cities and the Kherson region in athletics, volleyball, basketball, and table tennis. Their sports experience is 16±1.3 years. The first group included 42 female athletes and 4 athletes - candidates for master of sports. The second group - 34 candidates for master of sports and 14 masters of sports. The groups were homogeneous in types of sports and age criterion - 29±1.2 years. The following data were obtained when analyzing the results of the questionnaire regarding the characteristics of the sexual and reproductive life of female athletes. In the 1st group (n=46), 28 (60.87%) athletes were officially married, 16 (34.78%) were in a "civil" marriage, 2 (4.35%) athletes were not married. All 100% of athletes are sexually active. The average "experience" of sexual activity was 7±1.7 years. Twelve women, or 26.1% of respondents in this group, have children. All of them have 1 child. 39 (84.8%) women were pregnant. Of these, 26 (66.67%) had 1 pregnancy, 11 (28.21%) of the surveyed women had 2 pregnancies, 2 (5.13%) of the surveyed athletes had 3 or more pregnancies. Of the 39 women in Group 1, 16 (41.03%) pregnancies ended in artificial termination before 22 weeks, and 9 (23.8%) had spontaneous abortions in the early stages of pregnancy. Of these, 5 (55.56%) women had an existing sexually transmitted infection.

All women in Group 1 had a superficial understanding of modern contraception. Information about the properties and use of various contraception methods was obtained by 36 (78.26%) respondents from popular women's magazines or the Internet. The remaining 10 (21.74%) received information from friends, acquaintances, and colleagues who had "successfully" used one or another type of contraception. A detailed analysis of the methods and means of contraception used in Group 1 revealed that interrupted sexual intercourse, as the most unreliable type of contraception [1,4,6], was actively used by 43 (93.48%) women. Condoms were used by 42 (91.3%) of them. 4 (8.7%) athletes did not "trust" them. It should be noted that the motivation for using condoms was more based on the prevention of sexually transmitted infections than on protection against unwanted pregnancy. This trend was equally evident in both married and unmarried women, due to the presence of periodic sexual contacts. Chemical methods of contraception (spermicides), in the form of vaginal suppositories, tablets or spermicidal ointments, were sporadically used by 27 (58.7%) women in Group 1. Spermicides were constantly or quite actively used as a form of contraception by 13 (28.27%) respondents. They mainly used spermicides of the pharmaceutical brands Pharmatex® and Erotex® [1,4,6]. Categorically reject or have had negative experiences with the use of spermicides by 6 (13.03%) women in Group 1.

Oral contraceptives (OC) were previously used by only 4 (8.7%) women. Their use was associated mainly with existing menstrual cycle disorders and were prescribed to them by gynecologists, primarily as a treatment for the existing pathology [1,4,9]. These were monophasic COCs (combined oral contraceptives) such as Logest®, Lindinet-20(30) ®, Femoden®, Jess® [1,4,5]. The duration of their use was 2-3 years. Three (6.52%) athletes, for the purpose of contraception and cosmetic treatment, used, as prescribed by a gynecologist, three-phase COCs (Triregol®, Tristin®, Triquilar®) [1,3,10]. One (2.17%) athlete took Charozetta®, which belongs to the group of purely progestin oral contraceptives (PPOC) that do not contain an estrogen component, but only progestogens. The drug was prescribed to the patient as a means of postpartum contraception [1,4,9]. In the 2nd group (n=48), we obtained the following data. 31 (64.58%) athletes are married, 14 (29.17%) are in a "civil" marriage, 3 (6.25%) are divorced or not married. 34 (70.83%) athletes have regular sexual activity. Episodic sexual intercourse is reported by 9 (18.75%) athletes. The absence of sexual intercourse for 6-9 months is reported by 5 (10.42%) women. The average "experience" of sexual life in the 2nd group was 7±1.7 years. Children (from 1 to 3) have 32 (66.67%) of the respondents. 45 (93.75%) women were pregnant. Of these, 29 (60.42%) had 1 pregnancy, 12 (25%) women had 2 pregnancies, 3 or more pregnancies were in 2 (14.58%) respondents. 41 (85.42%) athletes had from 1 to 4 artificial terminations of pregnancy. Spontaneous abortions in the early stages of pregnancy (from 1 to 3) were in 18 (37.5) % of women.

All of the surveyed women in the 2nd group regularly use interrupted intercourse and condoms as a method of contraception. Also, 14 (29.17%) periodically use modern methods of situational hormonal contraception - the transdermal hormone-containing patch "EVRA"® [1,4,9]. Eight (16.67%) athletes periodically use the vaginal ring "Nova-Ring®" for temporary contraception [1,3,10]. Seven (56.25%) women use spermicides "Pharmatex®", "Patentex-Oval N®", "Benatex®" [1, 4, 5]. In 2 (4.17%) athletes, the intrauterine releasing system "Mirena®" was inserted for contraceptive and therapeutic purposes [1,4,6]. Four athletes periodically used emergency contraception such as Escapel® and Postinor® [1,4,9]. 16 (33.33%) women, in agreement with the trainer and sports doctor, and 7 (14.58%) independently took COCs, both monophasic (Logest®, Lindinet-20 (30) ®, Femoden®, Jess®, Yarina®, and three-phase (Triregol-28 tablets®, Tristin®, Tri-merci®, Triquilar®) [4, 9, 10]. None of the athletes from the two groups ever used NFPM (natural family planning methods) as a method of contraception [1,6]. Only 19 (41.3%) athletes of the 1st group and 5 (10.42%) athletes of the second group regularly keep their "menstrual" calendar to track the days of possible ovulation [5,6].

Conclusions

1. Most respondents do not have a clear idea of the types, properties and effects of modern contraceptives on the female body.

2. A fairly high rate of artificial termination of pregnancy among female athletes in both groups (41.03% and 85.42%) is directly related to the active sexual life of female athletes and the phenomenon of unprotected sexual intercourse, with the use of contraceptives arbitrarily chosen by the female athletes themselves.

3. Control over the use of various contraceptives by female athletes of different levels of athletic skill and qualification should be, in our opinion, one of the priorities of the professional competence of both the coach and the sports doctor.

4. The gynecologist, with the active participation of the sports doctor, should familiarize female athletes with their individual capabilities and acceptable options for the use of modern contraceptives.

5. The selection and use of various contraceptives should be carried out with an individual approach.

6. The objectives and selection of hormonal contraception for female athletes require strict consideration of the type of sport (cyclic or acyclic) in which the athlete is involved, as well as strict adherence to contraindications for their use.

7. The choice of contraception by female athletes directly depends on her age, sexual activity, initial level of somatic and reproductive health, and type of sport.

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