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Research Article

To The Question of Active Sports During the Period of Menstrual Bleeding

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Abstract

The article presents the results of a study aimed at identifying the individual characteristics of the self-functioning and physical activity of athletes engaged in different sports, with their active sports, during menstrual bleeding. The results of anonymous questionnaire and additional interviews were studied and analyzed. The relationship between the timing of professional sports, the level of sports skills, durability and volume of physical exertion, is actively engaged in sports during menstrual bleeding. According to the results of the study, practical conclusions were made, and practical recommendations are given.

Keywords: sportswomen; sports; menstrual cycle; menstrual bleeding

Abbreviation

OMC - ovarian-menstrual cycle
MB - menstrual bleeding
MS - Masters of Sports
CMS - Candidates for Master of Sports

Introduction

Among the urgent and demanded problems of modern women's sports, a special place is occupied by the problem of compatibility of different phases of the ovarian-menstrual cycle (OMC) and active sports. On this topic, in recent decades, hundreds of articles, monographs and extensive research results have been written in many countries of the world, but so far, there is still no single, jointly developed authoritative opinion on this issue. A number of authors advocate that female athletes can, without any restrictions, go in for sports in all phases of the menstrual cycle [1,4,6,7]. Other researchers, pointing out the advantages and disadvantages of playing sports in different phases of the OMC, nevertheless have a negative attitude to active training and sports during the period of menstrual bleeding, referring to the results of their studies [2,3,5]. At the same time, both those and others refer, first of all, to the opinion and feelings of the athletes themselves [1,3-7]. Sometimes, researchers, for comparison, use the feelings of women from the control group when they have various kinds of physical activity, incl. during their short-term sports activities, at different periods of the OMC. In our opinion, such a comparison is incorrect and methodologically erroneous, since lifestyle and volume, frequency and intensity of physical activity are absolutely incompatible in women-athletes and non-athletes [2]. The opinion of the last authors, making comparisons between athletes and non-athletes, cannot serve as an absolute criterion in the study of medical and biological characteristics of the OMC in professional athletes exposed to long-term and long-term, adaptive processes directly related to, first of all, the functioning of the reproductive and endocrine systems of professional female athletes. In addition, a number of studies devoted to adaptive changes in the OMC indicate that a significant number of professional athletes, incl. and who began their sports activities in the period before the appearance of menarche, they already have, or hypomenstrual syndrome, with clinically pronounced phenomena of oligo-, hypo- and opsomenorrhea and, even, in some cases, secondary amenorrhea [2]. Naturally, in the presence of such far-reaching variants of the adaptive process, when the entire OMC lasts less than 3 days, the volume of menstrual blood lost is 50 ml or less, for all days of menstrual bleeding, and the latter, not only very meager, often lasts 1 day, in the absence, for the most part, of pain and vegetative sensations, athletes will argue that they do not care which phase of the OMC they can play sports! As already established, the phenomena of hypomenstrual syndrome and secondary amenorrhea are permanently formed in professional female athletes for years. But, another matter, young menstruating athletes, with very little sports experience and an insignificant level of sports qualifications. In their body, gradually, just beginning, somatic adaptive processes, with different vectors of their direction. It is in this group, most often, that it is possible to identify objective and reliable changes in physical and psychological sensations (pain syndrome and vegetative manifestations),

as well as, determined by the athletes themselves, individually, changes in their physical activity and other parameters (speed, agility, flexibility, strength, endurance, etc.) [2].

Aim of the work: to conduct a comparative analysis of the results of sensations of athletes of different age groups, with different sports experience and level of sports qualifications, during their active sports, during the period of menstrual bleeding.

Material and methods

To conduct this study, we used the author's version of an anonymous questionnaire to study the characteristics of the OMC in female athletes (Bugaevsky K.A., 2020 ©), consisting of 28 questions. lso, to clarify the necessary details of the study, we used the method of survey / extended interviewing of female athletes. After the completion of the study, the processing and analysis of the results obtained, the individual characteristics of sports in sportswomen of both studied groups, during the period of their menstrual bleeding (MC) were carried out. Also, a literary-critical analysis of the available sources of information on the issue under study was carried out. In total, 1643 athletes took part in the study. Of them: those who go in for playing sports (n = 245); different types of athletics (n = 274); weightlifting and athletic sports (n = 346); art and sporting gymnastics, acrobatics and dancing (n = 351); different types of single combats (n = 313); cycling (n = 114). In their trainers in Ukraine (Nikolaev, Kherson, Zaporozhye, Novaya Kakhovka). In terms of age indicators, the athletes belonged to the youth and the first mature (reproductive) age. The average age of female athletes in the adolescent age group was 20.13 ± 0.79 years, in the first reproductive (mature) age group - 24.33 ± 1.06 years. The terms for female athletes to practice their sports ranges from 4.5 years to 9 years for the CMS group, from 9 years or more for female athletes of the level of a master of sports. Sports qualifications of female athletes are presented as follows: I sports category - 807 (49.12%); Masters of Sports (MS) - 347 (21.12%) athletes; Candidates for Master of Sports (CMS) - 489 (29.76%) female athletes. In this regard, we, conditionally, in connection with the timing of sports and the level of sports qualifications, the female athletes were divided into 2 groups: in the first there were athletes with the I sports category and the duration of sports in the range of 4.5-5 years - 807 female athletes ; and, in the second study group, there were more qualified female athletes - masters of sports (MS) - 347 athletes; Candidates for Master of Sports (CMS) - 489 (29.76%) female athletes, in total - 836 people.

Result and discussion

After carrying out the necessary research (anonymous questioning and survey / extended interviewing) in the group of athletes with the I sports category, we received the results that are shown in Table. 1, with a value of $p<0.05$:

Indicator name	The presence of hypomenstrual syndrome	The presence of secondary amenorrhea	Active sports during MB
Female athletes involved in team sports (n=119)	53 (44,54%) Sportswomen	No Sportswomen	35 (29,41%) Sportswomen
Female athletes engaged in Easy Athletics (n=143)	31 (21,68%) Sportswomen	No Sportswomen	5 (3,5%) Sportswomen
Female athletes involved in weightlifting and other weightlifting athletic sports (n=169)	39 (23,08%) Sportswomen	No Sportswomen	3 (1,78%) Sportswomen
Female athletes engaged in gymnastics, acrobatics and sports dancing (n=206)	74 (35,92%) Sportswomen	No Sportswomen	11 (5,34%) Sportswomen
Sportswomen engaged in different types of martial arts (n=73)	24 (32,88%) Sportswomen	No Sportswomen	9 (12,33%) Sportswomen
Cycling women (n=83)	25 (30,12%) Sportswomen	No Sportswomen	3 (3,61%) Sportswomen

Table 1: *Features of the OMC in athletes with the I sports category*

The analysis of the obtained results of questioning and interviewing, in the group of young athletes, with the I sports category and experience in sports from 4.5 to 5 years, in their sports, showed that a number of these athletes, in each of the presented sports disciplines, already have formed hypomenstrual syndrome. The largest number of athletes with hypomenstrual syndrome was found among representatives of team sports, gymnasts and acrobats, in the martial arts group, and the smallest - in easy athletics. At the same time, none of the 807 athletes was found to have secondary amenorrhea. Also, it was found that they are actively practicing sports (training and performing at competitions) - only 66 (8.18%) athletes in this group. The smallest number of athletes is determined in the groups of athletics and weightlifting, as well as cycling. The girls explained that practicing these sports, during the MB period, causes them to have a sharp increase in abdominal pain, increased bleeding, vegetative manifestations, against the background of a sharp decrease in physical performance in all its manifestations. At the same time, representatives of team sports, martial arts and gymnastics, acrobatics and dance sports motivate their classes by the compulsion to participate in training and competitions, so as not to let the team and the coach down, not to miss a workout once again, not to seem weak and other similar motivation, while that they also note a loss of strength, pain of varying intensity, and low efficiency.

The results of a similar study, but already, among female athletes (n = 836) with higher sports experience and level of sports qualifications (CMS and MS), are presented in table. 2, in% ratio:

Indicator name	The presence of hypomenstrual syndrome	The presence of secondary amenorrhea	Active sports during MB
Female athletes involved in team sports (n=126)	113 (89,68%) Sportswomen	13 (10,32%) Sportswomen	109 (86,51%) Sportswomen
Female athletes engaged in Easy Athletics (n=131)	119 (83,58%) Sportswomen	12 (9,16%) Sportswomen	114 (87,02%) Sportswomen
Female athletes involved in weightlifting and other weightlifting athletic sports (n=177)	160 (90,39%) Sportswomen	17 (9,61%) Sportswomen	160 (100,00%) Sportswomen
Female athletes engaged in gymnastics, acrobatics and sports dancing (n=145)	127 (87,059%) Sportswomen	18 (12,41%) Sportswomen	123 (84,83%) Sportswomen
Sportswomen engaged in different types of martial arts (n=41)	32 (78,05%) Sportswomen	9 (21,95%) Sportswomen	39 (95,12%) Sportswomen
Cycling women (n=31)	27 (87,10%) Sportswomen	4 (12,90%) Sportswomen	28 (90,32%) Sportswomen

Table 2: *Features of the OMC for female athletes with higher qualifications*

The analysis of the obtained results of the questionnaire survey and extended interviewing, female athletes of the group of higher qualifications, duration, volume and intensity of sports, convincingly showed that in this group, 73 (8.73%) female athletes have secondary amenorrhea, and the remaining 763 (91.27%) female athletes - clinically pronounced hypomenstrual syndrome. In addition, 573 (68.54%) female athletes continue to actively engage in sports while they have MB. These indicators significantly, at times, differ from those of their younger and younger colleagues - 66 (8.18%) female athletes!

Conclusions

1. It was found that in different age and qualification groups of the studied athletes, there are cases of clinical manifestations of hypomenstrual syndrome - 246 (30.48%) and 578 (69.14%), respectively.

2. Secondary amenorrhea, not established at all, in female athletes of the first category, but was established in 73 (8.73%) female athletes, with the qualifying level of CMS and MS.

3. It was found that only 66 (8.18%) athletes of the first category practice active sports during their MC, and in the group of their more eminent colleagues - 573 (68.54%) athletes continue to actively engage in sports during their presence they have MC, that is, 8.38 times more often.

4. In addition, it was found that many young athletes continue to go in for sports, if they have MB, pain and vegetative manifestations, only because of "remorse" and a sense of responsibility before the team and / or coach, so as not to "let them down" ...

5. In connection with all of the above, it is strongly recommended that both the coaching team, including the sports doctor, as well as the young athletes themselves, treat their health, in general, and reproductive health in a more reasonable, responsible and balanced manner particular, and not worry about what you can live without, even if only for the duration of their individual OMC.

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