Restoration Treatment for Female Patients with Non-Bearing Pregnancy at the Early Terms of Gestation

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The article presents the research materials devoted to the peculiarities of carrying out rehabilitation treatment and rehabilitation of patients with miscarriage induced by spontaneous abortions of different genesis at early gestation. A set of methods and tools proposed in the program of rehabilitation treatment at out-patient and sanatorium-resort stages of rehabilitation of the above group of patients is presented.

Keywords:
Female patients, Non-bearing pregnancy, Spontaneous abortion, Early pregnancy, Gestation, Restorative treatment, Rehabilitation.

Introduction
An important indicator of reproductive health is pregnancy failure, which has no decreasing trend worldwide [1-3]. Despite certain successes achieved in treatment and rehabilitation, the problem of pregnancy failure, especially in early gestation, is still urgent [4-6]. Thus, according to different authors, it ranges from 2 to 55%, reaching up to 80% in the first trimester. Statistically, 15 to 25% of all registered pregnancies are spontaneously miscarried, and 80% of pregnancies are terminated before 12 weeks of gestation. The incidence of spontaneous miscarriage remains consistently high, at 45-88.6% of early spontaneous miscarriages. Direct reproductive losses from non-pregnancy in Ukraine amount to 36-40 thousand unwanted children annually. It has been established that the state of reproductive health depends to a greater extent on the duration of pregnancy failure and the complex of rehabilitation measures [1-3].

When a pregnancy occurs within the first 6 months, after a previous miscarriage, a large number of repeated pregnancy losses have been noted. The rate of pregnancy loss after a single miscarriage is 13-17%, after two miscarriages 36-38%, and with recurrent miscarriage up to 45% [1-3]. After spontaneous abortion it is necessary to rehabilitate a woman’s reproductive health regardless of the number of spontaneous miscarriages, taking into account all the causes and conditions that contribute to spontaneous pregnancy termination. The principles of the reproductive health rehabilitation program for women after spontaneous miscarriage include the earliest possible initiation of treatment and rehabilitation measures, the principle of an individual approach to rehabilitation measures for each patient [4-6]. The principle of dynamic control over the effectiveness of rehabilitation and therapeutic measures and the principle of continuity between inpatient, outpatient, and sanatorium-resort units of rehabilitation measures are important when using the methods and means of physical rehabilitation [4-7].

Aim
To present one of the options for non-pharmacological restorative treatment in patients with early gestational pregnancy failure.

Materials and Methods
A group of 38 patients (n=38) with reliably similar gynecological pathology was selected for the study. The group of patients was practically homogeneous by age. The mean age of the patients in the study group did not significantly differ from each other (p>0.05) and was 31.4±2.3 years. A comprehensive program of physical rehabilitation for women after their inpatient treatment of spontaneous abortion at early gestational age (from 10 to 16 weeks) was developed. The methods used for the study included a preliminary review of the patients’ medical records. All of them underwent clinical and extended gynecological examination, ultrasound examination. Our proposed comprehensive physical rehabilitation program included such methods and means of physical rehabilitation as vumibliding, Lateral Femoral Condyle (LFC), vibration and gynecological massage, therapeutic exercises, Kegel exercises, fitnessball, reflexotherapy of biologically active points of the genital and endocrine systems on the feet, fitnessball [4,5,8-10]. In addition, during the sanatorium stage of rehabilitation, all patients received 15 sessions of aromatherapy with the use of aroma oils with a sedative effect, water therapy in the form of Charcot shower, circular shower, pine baths [4,5]. The efficacy of the rehabilitation measures was evaluated immediately after application and in dynamics: in 1-12 months.

Results and Discussion
To determine the quality of life and subjective assessment of the state of women who underwent spontaneous termination of pregnancy in early gestation, a questionnaire was administered to them during their inpatient and outpatient treatment and 6 months after that, at the sanatorium and spa rehabilitation stage.

According to the medical history, we divided all the women (n=38) into three subgroups depending on the gestational age: I subgroup: up to 10 weeks, II subgroup: 10-12 weeks of gestation, and the third group: 12-16 weeks of gestation. During the collection of anamnesis the patient’s age, her occupation, professional aspect (length of service, presence of occupational hazards in the patients) were recorded. Also the presence of psycho-emotional and physical stress, bad habits were noted. The somatic status of the patients was assessed by questionnaires
and medical records. Menstrual and reproductive function and gynecological morbidity were studied in detail.

The patients of all three subgroups underwent 15-20 sessions of gynecological massage during the therapeutic and rehabilitation measures [8-10]. During the massage we determined the existing individual pathological changes (the position of the uterus, appendages and ligamentous apparatus in the pelvic cavity, changes in their size and consistency), the presence of pain, adhesions, infiltrates, fluctuations [9]. In the group of patients with a spontaneous abortion, in addition to the use of the main points of gynecological massage, attention was paid to the additional use of massage of the perineum, inner surface of the hips, lumbosacral area, lower abdomen. In the group of patients undergoing physical rehabilitation after early gestational miscarriage, sessions of special exercises by A. Kegel's method were added to strengthen the pelvic floor muscles [8-10]. In addition, in the rehabilitation complex we used V.E. Vasilieva's method, which helps to strengthen the muscles of the pelvic floor, lumbosacral area and abdomen [8]. In the group of patients with a spontaneous abortion, in addition to the use of the main points of gynecological massage, attention was paid to the additional use of massage of the perineum, inner surface of the hips, lumbosacral area, lower abdomen. In the group of patients undergoing physical rehabilitation after early gestational miscarriage, sessions of special exercises by A. Kegel's method were added to strengthen the pelvic floor muscles [8-10]. In addition, in the rehabilitation complex we used therapeutic physical training according to V.E. Vasilieva's method, which helps to strengthen the muscles of the pelvic floor, lumbosacral area and abdomen [8].

When used in reconstructive therapy of patients after spontaneous termination of pregnancy, we took into account the psychological factor associated with the loss of pregnancy. In the treatment we used 15 sessions of aromatherapy [3,6]. We used the following aromatic oils, which have a sedative, relaxing and adaptogenic effect (lavender, orange, mandarin, geranium, valerian, oregano. clary sage, melissa, fir, pine, cedar, mint [4-6]. The patients also received hydrotherapy with Charcot shower and circular shower (every other day) #10, coniferous and iodine-bromine baths (every other day) #10 [6,7]. Physiotherapeutic treatments were performed with the use of "Electrosleep-5" apparatus (ES 10-05) [7]. Electro-sleep procedure promotes normalization of higher nervous activity, improves blood supply of the brain, and has a sedative and soporific effect [7].

When questioned 3-6 months after spontaneous abortion, 63.2% of the patients in the study group whose physical rehabilitation included therapeutic physical exercise in the form of a set of special exercises that strengthen the abdominal and pelvic floor muscles according to the method of V.E. Vasilyeva [8] noted the normalization of menstrual function. To activate the menstrual and endocrine functions of the ovaries we used, as an alternative to drug treatment, the method of foot reflexotherapy, with the influence on the Biologically Active Points (BAP), responsible for reproductive function [5,6]. When ovarian function was evaluated in the postoperative period using basal temperature measurement in the study group, ovulatory cycles were restored in 12 women (31.6%) in the first 2-3 months, ovulation was determined in another 15 women (39.5%) in the 3rd-4th months after rehabilitation, and in another 6 women (15.8%) in the 5th-6th months. Ovulatory cycles after 6 months were not recorded in 3 (7.89%) women in the group. We also used vibratory massage on the lower abdomen (15-20 sessions) at daily intervals [6,10] and gynecological massage according to Benediktov I., modified by M. G. Schneiderman (15-20 sessions per course of rehabilitation) [10]. At the outpatient stage, in order to strengthen the pelvic floor muscles, improve blood and lymph circulation, and prevent adhesions, we used fitness-ball exercises 3-4 times a week [6,8]. In the subsequent 6 months after pregnancy loss, 14 (36.8%) patients of the study group became pregnant after applying the proposed complex of physical rehabilitation. Progressive pregnancy was recorded in 12 (31.6%) patients, 2 (5.26%) women had a spontaneous miscarriage at 6-8 weeks of their pregnancies. Thus, after the application of our proposed rehabilitative restorative treatment, after 9-12 months, reproductive function was restored in 41.67% of the women of the study group, 18 (47.4%) women in the group subsequently became pregnant and gave birth (Table 1).

**Table 1: Reproductive outcomes after rehabilitation treatment.**

<table>
<thead>
<tr>
<th>Indicators of the effectiveness of rehabilitation treatment</th>
<th>Appearance of a new pregnancy</th>
<th>Progressive pregnancy and childbirth</th>
<th>Termination of pregnancy at an early stage</th>
</tr>
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<tbody>
<tr>
<td>Six months after reconstructive treatment</td>
<td>14 (36.8%) female patients</td>
<td>12 (31.6%) female patients</td>
<td>2 (5.26%) female patients</td>
</tr>
<tr>
<td>9-12 months after reconstructive treatment</td>
<td>16 (42.10%) patients</td>
<td>18 (47.4%) patients</td>
<td>4 (10.53%) patients</td>
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Individual monitoring of the quality of life was carried out before treatment, during treatment, as well as at the stages of early and late rehabilitation using the questionnaire "Quality of life of women", with the assessment of 5 parameters (physical and mental condition, social and role functioning, general subjective perception of the state of their health). Assessment of the patients’ quality of life allowed us to continuously monitor the progress of rehabilitation and, if necessary, carry out its correction [5,6].

In the period of rehabilitation, after the rehabilitation treatment 65.0% of women had favorable psychological adaptation, in 35.0% - pathological psychological adaptation. Application of psychological support to women during the rehabilitation period contributed to faster normalization of menstrual (53.8%) and fertile (30.8%) functions of the patients.

**Conclusions**

1. After analyzing the available sources of information, it can be argued that at present there are insufficiently developed ways of early rehabilitation of women after spontaneous interruption of pregnancy, aimed at the prevention of infectious complications, menstrual disorders and restoration of fertility, using a set of...
methods and means of physical rehabilitation.
2. The developed complex of physical rehabilitation, being methodologically simple and not requiring large material expenses, can be actively used in a wide network of medical preventive institutions, both in-patient and out-patient.
3. Inclusion of the proposed complex of therapeutic and rehabilitative measures in the practice of rehabilitation treatment in patients at the outpatient and sanatorium-resort stages can significantly reduce the recurrence rate of spontaneous abortion in female patients.

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No.

**References**
5. Korobkova ES (2002) Rehabilitation of reproductive function with the correction of adaptive programs in women who have had an undescended pregnancy: Ph. - Ryazan, p. 132.