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Research Article

Value of Rehabilitation Program After a History of Caesarean Section

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Abstract

The article presents the materials of the study devoted to the peculiarities of the methods and means of physical rehabilitation in women who underwent coronary cesarean section. The stages of rehabilitation treatment in the conditions of obstetric hospital and antenatal clinics are presented and substantiated. The criteria for starting to use active physical activity after the operation are specified. The volume of rehabilitation measures in the late postoperative period, which can be carried out both outpatiently and at home, is presented.

Keywords: Cesarean Section; Women in Labor; Therapeutic Physical Education; Physical Activity; Exercise; Physical Rehabilitation

Introduction

Twenty years ago, the incidence of cesarean section (CS) did not exceed 2% of all deliveries. In the last 15-20 years, advances in medical technology have led to a 3-5-fold increase in the frequency of abdominal delivery [3]. According to the world literature, every fourth woman is delivered by cesarean section, and every fifth of them has postoperative period with complications. An increase in caesarean section frequency above 15% is not recommended by WHO, as it does not affect the reduction of perinatal morbidity and mortality among children born by caesarean section compared to that among naturally born infants [3,17]. The frequency of cesarean section in Ukraine is constantly increasing (from 9.58% in 1999 to 16.10% in 2009), which increases the risk of maternal and perinatal morbidity and mortality [5]. In the light of the above, the rehabilitation of women after cesarean section is an urgent problem of modern obstetrics, which is of great social importance. The purpose of this article is to highlight the peculiarities of practical stepwise application of different methods and means of physical rehabilitation in laboring women after operative delivery by cesarean section.

Aim

Methods and means of research

The study was conducted in 2021-2022. It involved 56 patients who underwent a scheduled coronary cesarean section. The mean age of the patients was 29.4 ± 0.47 years. The following methods were used: literature and bibliographic analysis, questionnaire survey, external obstetric examination, and ultrasound examination. In all patients, according to the requirements of this clinical protocol "Cesarean section", the necessary amount of research was carried out, all necessary indications and contraindications were taken into account, the type of surgical delivery was determined, the type and method of anesthesia was agreed [11]. All of the patients who took part in the study gave their voluntary consent to participate in it, as required by the Helsinki Agreement on Bioethics! n conducting this study, the author used the method of literary and critical analysis, available sources of information, both domestic and foreign, the method of mathematical statistics and the method of individual interviewing were used. In addition, in order to obtain the necessary information, the patients answered in writing the questions of the SAM questionnaire (self-feeling, activity, mood), consisting of 30 questions. All patients were given printed copies of the questionnaire and the method of filling it out was explained to them in detail. Subsequently, the results of the questionnaire were analyzed in detail.

Results of the Study and Discussion

In 49 (87.50%), the reason for elective cesarean section were various types of narrow pelvis with significant degrees of narrowing, improper fetal position, multiple pregnancies, large fetus and clinically narrow pelvis, and placenta previa [11]. In 7 (12.50%), the indications for elective cesarean section were various types of extra-

genital pathology, severe forms of complications - (first and second half of pregnancy) in the second half of pregnancy, and abnormalities of labor activity. Fifteen (26.79%) patients had their first pregnancy and first delivery, 37 (66.07%) had their second delivery, and 4 (7.14%) had their third or more delivery. The surgical access options for cesarean section were as follows: 1. bottom-cross section - 43 female patients (76,79%); 2. classic variant section - 4 female patients (7,14%); low classical cut/section – 9 female patients (16,07%).

Our study and the subsequent application of methods and means of physical rehabilitation and elements of rehabilitation treatment were conducted at the maternity department and women's clinic of the communal institution "Central City Hospital in Nova Kakhovka", Kherson region, Ukraine. All patients who took part in the study gave their voluntary consent to participate in it.

At the time the patients were in the maternity hospital, during the preoperative period, all the laboring women were explained and shown the necessary exercises they would use in the early postpartum period. These materials were also printed out and handed out to the women in the form of an instruction booklet. In addition, all the patients underwent a questionnaire, using the method of diagnosing their well-being, physical activity and mood with the help of an assessment scale [6,10,12].

In the early postoperative period (after 4-6 hours), all exercises were performed by the laboring women under the supervision of either a physical therapy instructor or specially trained nursing staff (midwife and/or nurse). These were mostly static, dynamic breathing and general strengthening exercises [2,13]. From day 2, pelvic floor muscle exercises, body rotation, alternating leg movements, bending and twisting were added. At first, women in labor did this lying down, and from day 4-5 they did it sitting up. During the last 2-3 days in the maternity hospital, women performed a set of exercises recommended for exercises at home [1,4]. After discharge from the maternity hospital, in the late postoperative period, a set of exercises for rehabilitation treatment was performed for 4-6 weeks on an outpatient basis, in the office of therapeutic physical training of the antenatal clinic and, if necessary, with the use of physical therapy procedures. Subsequent application of therapeutic physical training, walking, complex of special physical exercises and other means of necessary rehabilitation treatment [1,12,14].

The complex of the program of staged rehabilitation after a postoperative cesarean section included the second stage of rehabilitation impact, 6-8 months after surgical delivery. It is very important to assess reparative processes in the area of the suture in order to predict the formation of the scar, to determine the timing and extent of further rehabilitation [5,16]. This is due to the fact that recovery of sufficient morphofunctional fullness of myometrium in the scar area occurs within 1-2 years after cesarean section, and sometimes this process can take 3-4 years [14]. This largely depends on the technique of surgical access and peculiarities of the postoperative period, the presence of complications. The criterion for starting to increase the volume of physical activity and increase was determined after consultation and control examination by an obstetrician-gynecologist and, to a great extent, after control ultrasound examination and the consistency of the postoperative uterine scar and postoperative suture [5,14,16]. The cicatrix pathology with the presence of connective-tissue thickenings, cysts, myometrium inconsistency phenomena, interlayers with lipoid infiltration, hyalinosis and/or dystrophic changes) [14,16]. All this, when trying to activate the motor activity and increase physical loads, can lead to increased defects in the area of the postoperative scar in the uterine tissues, possible dilation, bleeding, pain, and more serious complications [2,9]. All of the above should be a criterion when deciding on the planning, carrying out, volume and intensity of physical activity and the individual spectrum of supposed exercises in the rehabilitation of this group of patients, their physical and sporting activities. Also, according to the control gynecological examination and ultrasound data, the processes and rates of uterine involution were assessed, taking into account the amount and composition of specific female postpartum secretions, the so-called "lochia" and restoration of the patients' ovarian-menstrual cycle (OMC), intimate life and postpartum contraception [7,8,14]. A score assessment of the patients according to the SAM (self-confidence, activity, mood) showed that the psychological mood of the female rehabilitators, to whom the complex method of rehabilitation activities was applied, was positive, effectively contributed to their faster recovery [6,10]. In the study group, taking into account the individual condition of the patients (according to the gynecological control examination) and ultrasound findings, taking into account the existing contraindications, the presence or absence of lactation, the patients underwent outpatient rehabilitation in the therapeutic physical education rooms at the antenatal clinic in the period from 6 to 8 months after the operative delivery. The set of rehabilitation methods and tools included exercises to strengthen the abdominal muscles, lumbosacral region, buttocks, hips and pelvic floor muscles. The exercises were performed in the first half of the day, 2 to 3 times a week, with sessions lasting up to 1 hour.

Also, in the course of the classes, individually selected fitness balls and exercise bicycles were used in addition. Back, lumbosacral, buttocks and hips were massaged every other day for 10-15 sessions. The duration of this stage ranged from 1 month (in patients with a low transverse incision), to 1.5-2 months in patients

with a low classic incision, and up to 2.5 months in patients with a more traumatic classic incision. At the same time, the female patients were offered the opportunity to do their own exercises at home, using a set of special Kegel exercises to strengthen the perineum and pelvic floor muscles, fitness-ball exercises, therapeutic exercises with a set of exercises for the abdominal muscles and lumbosacral area. Part of the patients, 21 (37.50%) underwent an additional stage of postoperative rehabilitation in a specialized sanatorium for the treatment of obstetric and gynecological pathology, using swimming, exercises in the pool with active physical exercises through aqua-aerobics, physical therapy, phytotherapy, and aromatherapy.

The control examination of the women carried out after 9-12 months and parallel assessment of psychological parameters showed not only their good well-being, physical and psychological activity and adequate mood, but also consistency of the postoperative suture, absence of complications, including adhesions, menstrual cycle and hollow life restoration in all the patients. This gives us an opportunity to talk about the adaptability and practical suitability of the proposed staged complex of methods and means of physical rehabilitation and a number of additional non-medicinal methods as a rehabilitation program for women who have undergone cesarean section.

Conclusions

- Maternity patients who have undergone cesarean section surgery should undergo staged individual rehabilitation, both in the early and late postoperative periods.
- The beginning of intensive physical activity, in the late postoperative period, should be coordinated with the doctor supervising the patient, taking into account all the absolute and relative contraindications.
- Taking into account the condition of the postoperative scar and the type of incision by which the cesarean section was performed, are the main factors determining the individual volume and duration of rehabilitation carried out.

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