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Colorectal cancer - Progress rehabilitation after surgery

Agnieszka Filarecka [1,3], Maciej Biernacki [2,3], Paweł Kaźmierczak [3], Rafał Kaźmierczak [3]

Collegium Medicum, UMK Bydgoszcz, Chair and Clinic of Oncological Surgery
Collegium Medicum, UMK Bydgoszcz, Chair and Department od Anatomy
Saint Celestine Association Mikoszyn

Corresponding author:

mgr Agnieszka Filarecka

Collegium Medicum, UMK Bydgoszcz, hair and Clinic of Oncological Surgery

Ul. Izabeli Romanowskiej 2, 85-796 Bydgoszcz, Poland

Tel. 503074346

e-mail: aga.filarecka@gmail.com

Abstract

Summary:

When colorectal cancer is removed, either by laparoscopic or classical open method, traumatization of the abdominal tissues occurs. Damage in the form of cutting muscle fibers is associated with a disorder of postural muscle tone. A scar itself within the abdominal cavity can create mobility

restrictions in the form of restrictions on the mobility of the spine. The implementation of rehabilitation before and after surgery should be an indispensable element in the treatment of colorectal cancer.

The work aims to present therapy proposals using modern special rehabilitation methods to improve patients after surgical treatment of colorectal cancer. The paper presents examples of activities that can be used in therapy in its various phases. A review of available literature and own experience were used for the work.

From the analyzed literature, it can be concluded that rehabilitation of oncological patients is not widespread and often overlooked in the treatment process. Patients often after surgery to remove colorectal cancer are not subject to rehabilitation, pre-operative rehabilitation also occurs sporadically according to literature.

Rehabilitation of patients after surgical treatment of colorectal cancer should take place before and after surgery. Rehabilitation should take into account the weakening of the muscle strength in the torso and mobility limitations caused by the postoperative scar. Rehabilitation should be aimed at restoring functionality.

Key words: physiotherapy, colorectal cancer, cancer, oncological rehabilitation

INTRODUCTION

The problem of rehabilitation of cancer patients is still a neglected issue, there is a shortage of staff educating patients in cancer departments.

Colorectal neoplasms are responsible in the world for 8% of cancer deaths, which is the fourth most common cancer cause of death in the world, causing about 600,000 deaths (8%) annually. Mortality is lower in women than in men [1].

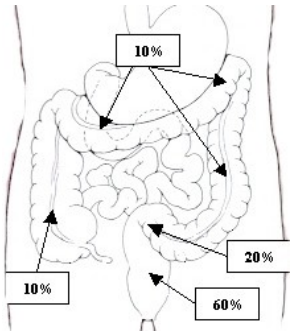

Fig. 1. Occurrence of cancerous lesions in the large intestine [1]

After the age of 50, the incidence of gastrointestinal neoplasms increases very quickly with each subsequent decade.

At the same time, in the most threatened age groups, cardiovascular and respiratory diseases as well as other organs important for life are a serious burden, which significantly limits the efficiency of the system. [1,2].

It is estimated that as many as 80% of people over 65 are affected by at least one cardiovascular or respiratory disease. This clearly shows the scale of threats to which patients are exposed to malignant tumors.

This is not the only problem in this group of patients.

Physical and mental fitness decreases with age, therefore the treatment of the underlying disease may be limited by the presence of comorbidities, or the comorbidity will cause failure of the underlying disease.

The method of treating colorectal cancer depends on the stage of the disease at diagnosis.

Surgery is always the basic treatment method for colorectal cancer and should be considered in any case.

At the same time, it should be emphasized that surgery is not always possible, and sometimes it should be postponed - after completing the use of other, initial (so-called neoadjuvant) methods of treatment.

Due to the surgical treatment and traumatization of the therapy, exercises can be used in the first days after surgery, if there are no contraindications for performing kinesitherapy.

The selection of exercises depends on the operating method and the patient's condition.

In most cases of colorectal cancer, however, it is necessary to resect the tumor together with a fragment of the colon. This procedure is performed under general anesthesia. It is usually performed by cutting the abdominal skin 15-30 cm long [3].

In recent years, attempts have been made to cut out parts of the colon with cancer using a laparoscope. The decision about the possibility of such surgery depends on the size and location of the tumor, comorbidities and patient preferences [4]. Publications assessing the possibility of performing laparoscopy in cases that until recently were considered to be reserved for open surgery due to the patient's severe general condition can be considered very important. It was shown that the number of complications, mortality, and the need for repeated hospitalizations were similar, but hospital stay after laparoscopy was clearly shorter [5]

Researchers have concluded that age cannot be treated as a contraindication to laparoscopic colon surgery, and should even be considered an indication for the use of this technique [4].

The best quality of life for patients should be ensured at every stage of treatment. The improvement process should take place in parallel with the treatment process, as it is its component.

Due to surgery, we can distinguish as side effects:

Change in posture - caused by a scar within the abdominal wall affecting the mobility of the spine,

Restriction of mobility in the joints of the rim of the upper limb,

Decrease in muscular strength in postural muscles

Physiotherapeutic procedures should be adapted so that it would act comprehensively on all adverse effects.

Due to the fresh surgical scar, exercises involving the torso directly are inadvisable. Using the PNF (proprioceptive neuromuscular facilitation) method, we can indirectly affect structures located in the operated area.

Available literature focuses on anti-edema prevention in the first phase after surgery.

REVIEW OF THE LITERATURE

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3. Literature review

Existing studies do not present the use of the PNF method in the rehabilitation of people after surgical treatment of colorectal cancer. The literature describes the PNF method mainly in neurological dysfunction studies.

3.2 Use of the method after surgical treatment of colorectal cancer.

Due to the surgical treatment and tissue traumatization, the therapy, by applying the main principles - the selection of the appropriate technique and irradiation, and the philosophy - painless exercises can be used in the first days after surgery, if there are no contraindications for performing kinesitherapy.

During therapy, you should first determine its purpose. For this purpose, we can use the ICF classification [6]

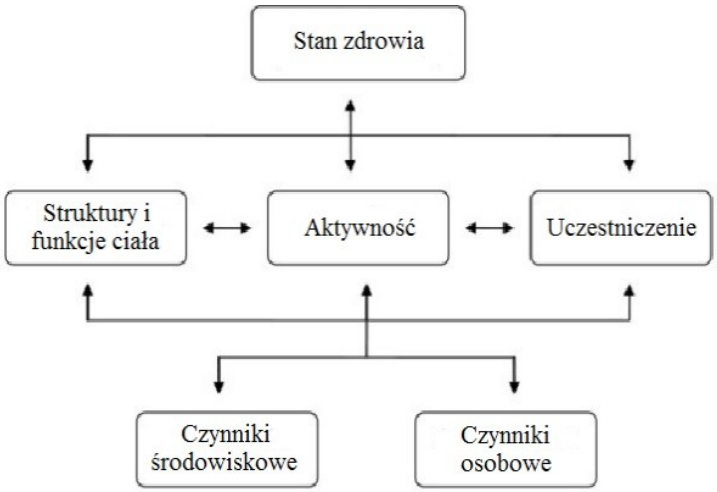

Fig. 2. ICF procedure and classification

PROPOSED THERAPY

The patient's rehabilitation method can be divided into four stages:

- preoperative
- acute(until upright),
- subacute,
- chronic.

In the preoperative phase, in the case of oncological procedures, these are usually planned procedures, it is possible to prepare the patient physically for the procedure. For this purpose, general rehabilitation exercises are used, which mainly improve the flexibility of the abdominal muscles and increase their strength, but also breathing exercises.

In the acute phase, i.e. directly after surgery, the rehabilitation procedure is aimed at preventing venous stasis and improving the quality of breathing.

Fig. 3. Moving the lower torso

In the first stage after surgery, it is recommended to use techniques in which there is no movement but isometric muscle tension.

Own observations also show that the use of positioning positively affects the recovery of fitness. By correctly positioning the patient, you can affect the elasticity of the scar, which is a key element for further rehabilitation.

Changing position, i.e. transfer in the first days after surgery, is a factor causing pain to the patient and causing discomfort. Self-attempting to change the position causes the patient pain, which occurs through the abdominal muscles. The therapist through facilitation-paving, is able to relieve the patient and make a move without the occurrence of pain sensations. For this purpose, by raising the head, the patient stimulates the abdominal muscles to tension, and the therapist, by relieving movement through the facilitation of the shoulders, sets the direction of movement (Fig. 3).

Fig. 4. Moving the lower torso

When moving the lower torso, pelvic floor tension, hip extensors, lower abdominal muscles occur. To support movement, the therapist relieves and directs movement through the grip on the trochanter of larger hip bones. Each time the patient changes position he initiates movement (Fig. 4).

In the subacute phase In this phase, when the patient undergoes verticalisation, orthostatic reactions are the most important. After immobilization after surgery, orthostatic disorders are a common complication, especially in the elderly. Emphasis should be placed on anticoagulant exercises and stimulation of deep sensation.

In this phase, the mobilization of the scar is equally important, especially when the surgical incision has healed. For this purpose, a scar is developed using fascial mobilization techniques to make the abdominal skin more flexible and restore tissue slippage. Head patterns can be used to increase abdominal muscle tone. By raising the head, the chin is directed to the sternum and the patient rotates through the flexion pattern headache causes tension in the abdominal muscles. Rotation involves the muscles obliquely on the side where it is made. (Fig. 5.)

Fig. 5. Facilitation of the abdominal muscles through the flexion pattern of the head.

CONCLUSIONS

1. Rehabilitation after surgery is necessary to reduce postoperative complications.
2. Rehabilitation should be started in the pre-operative phase.
3. The PNF method can be used in any phase of patient rehabilitation after surgical treatment of colorectal cancer.
4. During therapy, the goal of rehabilitation should be determined and the patient's abilities determined.
5. The goal of rehabilitation should be preceded by diagnostic tests.
6. We should not include physical therapy in rehabilitation.

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