
STUDY OF PREHABILITATION PATIENTS' NEEDS FOR DIAPHRAGMATIC HERNIA SURGERY

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Abstract: Introduction: The process of strengthening the functional capacity of the individual, which allows him to withstand operational stress, is called "pre-rehabilitation". In ERAS systems, patients are prepared for the stress of surgery through preoperative training, optimal nutrition and a set of physical exercises.

Objective: The aim of the present study was to demonstrate the benefits and advantages of pre-rehabilitation in the early postoperative recovery of patients after diaphragmatic hernia surgery.

TASKS: Identifying the need and opportunities for the introduction of pre-rehabilitation through a survey of nurses. Study of patients' needs for pre-rehabilitation.

Performing a comparative analysis between two groups of comparable patients "With" and "Without" applied rehabilitation program.

Methods: Documentary method - prospective and retrospective analysis of hospital documentation. Sociological method - a survey was conducted in 60 of the patients.

Results and discussion: The 112-month period September 2010 - December 2019 was analyzed, during which 330 patients with diaphragmatic hernias were operated, of which 322 laparoscopic and 8 conventional. Of the hernias in the laparoscopic group, 306 were primary and 16 recurrent. 12 of the recurrences were after laparoscopic antireflux surgery and 4 after conventional surgery.

The protocol for early postoperative recovery was applied in 240 of the patients, which is the analyzed group (Group A), and the remaining 90 patients are the control group (Group B). Patients in the study and control groups were comparable in age, comorbidity, risk factors for postoperative complications and type of hiatal hernia and surgery performed.

Criteria analyzed: period of movement of the patient (with help and independently), term for recovery of the intestinal passage, presence, type and severity of postoperative complications and postoperative hospital stay.

In study group A, in which the PCB protocol was applied, postoperative complications were 6.66% versus 11.2% in patients in group B, exercise was in the second postoperative hour, and postoperative hospital stay was 48 hours.

Conclusion: The implementation of a RSV protocol allows for maximum reduction of hospital stay, reduction of postoperative complications, better quality of life for patients and minimization of costs (in the optimal amount, without compromising the quality of activity).

Keywords: pre-rehabilitation, training, patients, early postoperative recovery

1. INTRODUCTION

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2. OBJECTIVE

The aim of the present study was to demonstrate the benefits and advantages of pre-habilitation in the early postoperative recovery of patients after diaphragmatic hernia surgery.

TASKS: Identifying the need and opportunities for the introduction of pre-rehabilitation through a survey of nurses. Study of patients' needs for pre-rehabilitation.

Performing a comparative analysis between two groups of comparable patients "With" and "Without" applied rehabilitation program.

3. METHODS

Documentary method - prospective and retrospective analysis of hospital documentation. Sociological method - a survey was conducted in 60 of the patients.

4. RESULTS AND DISCUSSION

The 112-month period September 2010 - December 2019 was analyzed, during which 330 patients with diaphragmatic hernias were operated, of which 322 laparoscopic and 8 conventional. Of the hernias in the

laparoscopic group, 306 were primary and 16 recurrent. 12 of the recurrences were after laparoscopic antireflux surgery and 4 after conventional surgery.

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In study group A, in which the ERAS protocol was applied, postoperative complications were 6.66% versus 11.2% in patients in group B, exercise was in the second postoperative hour, and postoperative hospital stay was 48 hours.

In our clinic we apply a protocol for early postoperative recovery, using the criteria of ERAS (Enhanced Recovery After Surgery), which allows maximum reduction of hospital stay, reduction of postoperative complications, better quality of life for patients and minimization of costs (optimal amount, without deteriorating the quality of the activity). In general, the essence of the model for early postoperative recovery in antireflux surgery is:

Preoperative period:

- Information about the nature of the disease;
- Information about the ways of treatment - operative, conservative, alternative;
- Information about the experience and opportunities of medical institutions and specialists (in Bulgaria and possibly abroad);
- Recommendations for diet - predominant intake of carbohydrate food 20 days before surgery, stopping meals 6 hours before surgery, stopping fluid intake 2 hours before surgery;
- Stopping alcohol intake - 20 days before surgery;
- Stopping (restriction of smoking) - 20 days before surgery;
- Maximum short preoperative hospital stay - if possible outpatient preoperative preparation and examinations and hospitalization the day before surgery.

Intraoperative period:

- Providing normothermia;
- Perioperative intestinal preparation;
- Avoid the use of nasogastric tubes and catheters (insert a calibration probe type "bougie" Ch 36 after induction of anesthesia and remove it immediately after calibration of the crurography and fundoplication);
- Perioperative antibiotic prophylaxis (according to indications in patients at risk of infectious complications).

Postoperative period:

- Fight and prevention of pain;
- Prevention and treatment of postoperative nausea and vomiting;
- Antithrombotic prophylaxis;
- Prevention of wound infection;
- Early feeding;
- Early movement;
- Early removal of probes, catheters, venous sources;
- Early hospitalization;
- Information about the post-hospital period - in which cases contact with a doctor is necessary and when re-hospitalization is necessary.

Behavior after discharge from hospital

After laparoscopic surgery, most patients do not experience severe pain, but may experience abdominal and chest discomfort and difficulty swallowing. This condition in our patients usually passes within 48 hours.

After laparoscopic hiatal hernioplasty, some Western centers practice allowing the patient to return home the same day if he has recovered from anesthesia. Otherwise, he can spend the night in the hospital and must be able to walk on the day of the operation. However, this involves very strictly regulated control for postoperative follow-up by a GP, community nurse or other medical staff. The patient's actions are also postulated when and in what cases, how to act: when and to whom to call, when to take an antibiotic, what and for how long, when an antipyretic is needed, in what condition to go to a surgical unit and when is indicated for rehospitalization. And all this should be bound by a legal framework (prepared written instructions).

In our clinic we apply a protocol for behavior after discharge, borrowed from the British health system UK National Health Service (NHS):

- Patients are discharged on the 48th hour after the operation (this is largely due to the requirement of the Health Insurance Fund for a minimum hospital stay);

- In the days after surgery, patients are advised:
 - wash the incision area daily with ordinary soap and water;
 - take a shower instead of a bathtub and avoid the use of swimming pools and hot tubs;
 - walk whenever possible to prevent thromboembolic complications;
 - avoid drinking through a straw ;
 - to practice specific breathing exercises and to avoid coughing in order to strengthen the diaphragm.
 - In the weeks following the operation, the UK National Health Service recommends the following:
 - avoid lifting weights for 2 to 3 weeks;
 - avoid driving for 7 to 10 days;
 - return to work within 2 to 3 weeks or whenever a person feels well enough;
 - taking painkillers for a few days after surgery to minimize discomfort.
- Patients need to follow a specific diet after surgery. It is recommended to drink clear liquids immediately after the operation, and the next day to switch to soft or liquefied foods, including mashed potatoes, cocktails and soups. Foods that cause gas and bloating should also be avoided.
- During recovery, it is recommended that the daily ration be divided into several smaller meals throughout the day instead of three large ones.
- Most patients can return to their normal preoperative hygiene regimen 3 to 6 weeks after surgery. However, even after the patient has made a full recovery, we recommend that they continue to limit or avoid foods that contribute to symptoms of gas, bloating, and acid reflux.

5. CONCLUSION

The implementation of a ERAS protocol allows for maximum reduction of hospital stay, reduction of postoperative complications, better quality of life for patients and minimization of costs (in the optimal amount, without compromising the quality of activity).

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