

The Study on Perioperative Nursing for the Patients with Inguinal Hernia

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ABSTRACT Objective: This paper is to explore the nursing experience of the perioperative period of inguinal hernia. **Method:** Make a retrospective analysis of the clinical data of 100 cases of patients who received laparoscopic inguinal hernio therapy in our hospital from June 2014 to February 2015, offer Western and Chinese nursing and appropriate medicine treatment. **Results:** The operations of the 100 cases of patients are successful, with no transfer open surgery. After the operation, 5 cases of patients have postoperative complications, 2 report slight pain and discomfort in the inguinal region 6 hours after the operation and 3 suffer unilateral scrotum seroma. All are cured after proper treatment. During the postoperative follow-up of 1-18 months, no recurrence cases are found out. **Conclusion:** Laparoscopic inguinal hernia repair is characterized by slight injury, fewer complications and lower recurrence rate, and careful perioperative nursing can improve the success rate and cure rate of the surgery, reduce the occurrence of complications and is worthy of promotion.

KEYWORDS

Inguinal hernia
Perioperative
Nursing

1. Introduction

Inguinal hernia is one of the common diseases of general surgery department. Laparoscopic hernia repair is a new surgical method emerging in the 1990s. Compared with open tension-free surgical method, it has the advantages such as small surgical trauma, slight pain, fewer complications and better cosmetic effect, and has been used widely clinically. However, there still exist certain complications in terms of laparoscopic hernia repair, such as hematoma, subcutaneous emphysema, respiratory tract infection after general anesthesia, etc. [1]. From June 2014 to February 2015, our department completed 100 cases of laparoscopic inguinal hernia repair, which turned out to be satisfactory by the combination of traditional Chinese and western medicine of perioperative nursing and proper medical treatment. The report is as follows.

2. Clinical data

2.1. General data

The 100 patients are all males with age ranging from 61.35 ± 6.71 ($\bar{x} + s$). Among them, 68 cases suffer inguinal hernio on the left side, 32 on the right side and 6 bilateral. 92 cases suffer oblique hernia, 8 cases straight hernia, 6 cases bilateral hernias and 8 cases straddles hernia.

2.2. Method

The operations of all the patients are completed under the conditions of endotracheal intubation and general anesthesia. 95 of them undergo laparoscopic totally extraperitoneal inguinal hernia repair (TEP), and 5 undergo transabdominal preperitoneal prosthetic (TAPP). Specialized products of polypropylene are selected as the patching material and the peritoneal drainage catheters are retained in 72 cases of postoperative patients.

3. Results

The surgery of the 100 cases of patients is successful, with no transfer open surgery. After the completion of the surgery, the anal exhaust time of the postoperative patients is 10.75 ± 3.39 hours; they can get up and eat liquid food 6 hours after the surgery. 5 cases of patients suffer postoperative complications, 2 of who report mild pain and discomfort 6 hours after the surgery, and 3 of who show unilateral

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scrotal seroma. All of them are cured after proper treatment. The surgical incisions are healed in phase I and the average days in hospital are 4.25 ± 0.83 . During the post-operative follow-up of 1~18 months, no recurrence cases are found.

4. Nursing experience

4.1. Pre-operative nursing

4.1.1. Psychological nursing

Laparoscopic hernia repair is a new way of operation; therefore the patients suspect its therapeutic effect and prognosis. According to the patients' personality and psychological quality, we shall do psychological counseling, patiently answer the patients' questions and guide them to prepare well by coordinating with the doctors, and meanwhile explain in detail the surgical procedures, characteristics, treatment effect and safety, so as to improve the patients' confidence in the surgery [2].

4.1.2. Preoperative control of background diseases

The patients should quit smoking before the surgery, control their blood pressure and blood glucose at the levels suitable for operation, and avoid the upper respiratory tract infection in order not to induce chronic bronchitis, because intense cough may cause the hernia out.

4.1.3. Preoperative preparation

Complete routine blood examination and the check of liver and kidney functions, blood coagulation function and cardiopulmonary function, and make comprehensive assessment on the patients; advise the patients to take light diet and high protein and digestible food to enhance immunity; guide the patients to practice relieving the bowels in bed; besides regular skin preparation 1 day before the surgery, special attention should be paid to navel cleaning to prevent infection; fast 12 hours before the surgery and drink no water 4 hours before the surgery with indwelling catheter; give the patients intramuscular injection of atropine 0.5 mg and sodium luminal 0.1 g as prescribed. Actively control the background diseases. Ask the patients to quit smoking before the surgery to alleviate the stimulation to respiratory tract and reduce respiratory secretions, and instruct them to keep warm and prevent colds; control the blood pressure and blood glucose in suitable scope of the surgery; preoperative cough or constipation symptoms should be treated properly to avoid the increase of abdominal pressure [3].

4.2. Postoperative nursing

4.2.1. Routine nursing

The patients of general anesthesia should take recumbent position without pillow and tilt to one side to prevent tongue retropulsion and asphyxia, caused by intake of vomit. While being cold sober, the patient can take semireclining position and continuously take in low-

flow oxygen for 6 hours, and their vital signs should be monitored such as electrocardiogram, blood pressure and blood oxygen saturation. Early observation should focus on whether the puncture hole oozes blood or is infected, and pay attention to the oozing volume and color, while the later observation should put emphasis on whether there are red and swelling, induration and other infection signs. None of the patients of this group suffered wound bleeding or infection. Laparoscopic hernia repair leaves small incision, and the abdominal wall has only three incisions of 0.5~1 cm; the skin surface does not need to be sutured, but will heal itself in 3~5 days; generally there is not intense but mild pain. The patients of this group did not use analgesics [4].

4.2.2. Diet nursing

The patients can eat semiliquid food 6 hours after the surgery when they are cold sober from the anesthesia, and eat common food the second day, especially some crude fiber food. Avoid taking in milk, soybean milk or other food that easily produces gas. Encourage the patients to drink more water and keep defecation unobstructed.

4.2.3. Activity guidance

In traditional hernia repair, the patients should absolutely stay in bed 3 days after the surgery and do proper activities afterwards, and take part in heavy manual labor after 3 months. By contrast, after laparoscopic hernia repair, the patients are instructed to get out of bed and do some activity 6 hours after the surgery and gradually get back to normal daily life in 2 to 3 days, and can resume normal work after 1~2 weeks.

4.2.4. Pain nursing

The interference of laparoscopic surgery for abdominal viscera is less, therefore there is less postoperative pain and gastrointestinal functions recover more quickly. But people's pain thresholds are not the same. If the patients feel much painful, the nursing staff should explain the reason of the pain and offer painkillers appropriately when necessary [5]. None of the patients in this group felt intense pain, but 4 of them reported that the pain interfered with sleep, which was alleviated with rotundine, tramadol and other painkillers.

4.2.5. Catheter nursing

The purpose of keeping extraperitoneal indwelling catheter after the surgery is to observe the bleeding situation of the surgery field and prevent hemorrhage and hydrops of the field, which is advantageous to the wound fitting and patch fixation. Once there is more postoperative hemorrhage, poor drainage and hydrops, causing the patch float and shift, it means failure of the repair. The patients, the family and other caregivers should be educated before the surgery; fix the extraperitoneal catheter and keep enough

length for the patients to turn over and move; keep the drainage unobstructed and prevent pulling, prolapse and distortion; strengthen inspection tour and closely observe the color, quality, quantity and drainage speed and keep a record. Any abnormal situation should be reported to the chief surgeon [6].

4.3. Observation and nursing of complications

4.3.1. Respiratory infections

Encourage the patients to turn over and lightly cough, and back pat when necessary. Elderly patients who struggle with chronic bronchitis and ropy sputum can be given aerosol inhalation to dilute sputum and keep the cough expectoration and encourage early ambulation [7].

4.3.2. Hemorrhage

Observe whether patients are bleeding or oozing blood and observe the changes of their complexion, blood pressure and pulse. If the pulse is weak and speeding up and blood pressure drops, there might be internal hemorrhage, which should be reported to the surgeons in time and rescued timely to prevent the occurrence of shock, though the event rate is low.

4.3.3. Scrotum and groin seroma

3 cases of patients show scrotal seroma, of which, 1 case show insufficient pressure bandaging intensity after direct hernia, and 2 cases form hernial sac due to large peeling strength. The abnormal situations are observed and reported to the surgeons during postoperative nursing and punctured and pressurized guided by B-ultrasound. All are assimilated and cured.

4.3.4. Abdominal distension and difficult urination

The patients may feel abdominal distension easily, which is associated with the long operation time. In terms of nursing, traditional Chinese medicine *evodia rutaecarpa* 250 g + crude salt 250 g should be fried and put into a cloth bag [8] and applied to the abdomen clockwise around the navel under temperature of 50 to 60 degrees; the bag must be moved appropriately to avoid skin scorching. The symptom was relieved. As for the difficult urination caused by anesthesia methods, traditional Chinese medicine moxa sticks should be used to fumigate Guanyuan and Qihai acupoints 20 minutes each time, twice a day, which can effectively alleviate the patients' symptoms of abdominal distension.

4.3.5. Neurological complications

Laparoscopic surgery can easily damage femoral nerve and the lateral cutaneous nerve of muscle. The patients should be asked whether they feel skin numbness and needling pain in the perineum and the groin area. Any abnormal situation must be timely reported to the surgeons for treatment.

4.3.6. Subcutaneous emphysema

Subcutaneous emphysema is caused by inappropriate position of the pneumoperitoneum needle. When the pneumoperitoneum is formed, if gas is injected into extraperitoneal space or the punctured leather scabbard is imprecise, the carbon dioxide in the abdomen will enter the subcutaneous tissue via puncture sheath and make repeat punctures causing side holes in peritoneal which could lead to subcutaneous emphysema. Mild subcutaneous emphysema has minor effects and will disappear 2~3 days after the surgery.

4.3.7. Shoulder ache

Residual carbon dioxide in the abdomen can stimulate bilateral phrenic nerve and reflectively cause bilateral aches of the shoulders, which do not need special treatment and will gradually mitigate and disappear generally 3~5 days later.

4.4. Discharge instruction

Instruct the patients to nurse the incision properly and observe whether the incision is red, swelling, and painful or seeped as well as the condition of the skin around the pliation sticker. The incision must be waterproof and avoid perspiration to prevent infection. In case of any discomfort or preoperative symptoms after being discharged, return to hospital for medical advice or make telephone counseling. Patients with prostate increase should seek treatment actively. There is no special requirements for diet after discharge, but the patients should maintain defecation unobstructed, prevent constipation and colds, avoid heavy manual labor or strenuous exercise within 3 months; do not carry the weight more than 5 kg, to prevent hernia recurrence caused by increased abdominal pressure. Smoking patients should quit smoking.

5. Discussion

Laparoscopic total extraperitoneal hernia repair (TEP) is one of the hernia repair methods under laparoscope, which is completely tension-free hernia repair outside the peritoneum. Thanks to its advantages such as small and beautiful incision, mild pain after the surgery, low reoccurrence rate, low adverse reaction and complication, rapid recovery and low wound infection as well as almost the same treatment cost with open artificial mesh repair, it has been increasingly preferred by experienced laparoscopic professionals and technical personnel, and has become the most widely used laparoscopic hernia repair surgery. It is most suitable for inguinal hernia on both sides, hernia recurrence and composite hernia. It is hard to avoid some complications after the surgery. In nursing, our department has taken advantages of traditional Chinese medicine, treated some complications with Chinese medicine therapy and nursing, exerted the characteristics of Chinese medicine and better prevented and improved the patients' discomfort, forming a comprehensive nursing plan combining Chinese and

western medicines and having better curative effect without serious complications occurrence, which effectively reduces the nursing and medical workload and deserves further promotion.

Conflicts of interest

These authors have no conflicts of interest to declare.

Authors' contributions

These authors contributed equally to this work.

References

1. Zeng Y, Qi J, Xu M. Observation of the clinical effect of external application of evodia rutaecarpa treating mechanical ventilation and concurrent abdominal distension. *Practical Clinical Journal of Integrated Traditional Chinese and Western Medicine*. 2006;13(6):523–525.
2. Li J, Qiu M. Why should laparoscopic inguinal hernia repair be conducted. *Journal of Clinical Surgery*. 2009;17(11):752–754.
3. Ren Z. Laparoscopic inguinal hernia repair perioperative nursing experience. *Journal of Medical Information*. 2014;27(6):333–334.
4. Gao L, Ma Y. Perioperative nursing of laparoscopic inguinal hernia repair. *Guangdong Medicine*. 2007;28(1):170–171.
5. Wu Z, Li N. Prevention and Treatment of Common Surgical Complications. 2nd Edition. *Beijing: People's Military Medical Press*. 2007;150.
6. Zhou C. Comparison of the clinical curative effects of two surgical methods treating inguinal hernia. *Journal of Clinical Medicine*. 2013;17(17):59.
7. Ji X. Perioperative nursing of 300 tension-free repair. *Journal of Jilin Medicine*. 2010;7(31):3320.
8. Wang X. Nursing experience from 51 cases of laparoscopic total extraperitoneal hernia repair. *Journal of Qiqihar Medical College*. 2013;(17):2638–2639.