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Application of Nonanesthetic Painless Colonoscopy in Primary Hospitals

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Abstract

The author worked in a secondary hospital from August 2016 to September 2024. During this period, 7106 patients were treated with colonoscopy by single person operation (axial shortening method).99.92% (7100/7106 cases) from the end of the ileum. The comfort of the patients was 99.63 (7080/7106 cases); Pain was 0.13 (9/7106 cases); Complications included delayed bleeding of colorectal polyps in 5 cases (5/284 cases), and no intestinal perforation, mesenteric tear, etc.

As we all know, colonoscopy is the most difficult examination of endoscopy and in the past, it was also the one that could cause obvious pain and fear to patients. At present, due to the advancement of endoscope insertion technology, the frequency of use of colonoscopy is also increasing, and the treatment work under colonoscopy has developed rapidly. The author performed colonoscopy diagnosis and treatment on 7106 cases in secondary hospitals using the shaft-holding shortening method alone, and achieved good results, which are summarized as follows.

Keywords: Colonoscopy, Diagnosis, Treatment, Painless Technique, Single Person Operation Comfortable.

Introduction

Colonoscopy is a vital diagnostic and therapeutic procedure in gastroenterology, used for the detection and treatment of various intestinal diseases, including colorectal cancer, polyps, and inflammatory conditions. Traditionally, colonoscopy has been associated with significant discomfort and pain, often necessitating the use of anesthesia [1]. However, anesthesia-based procedures come with their own risks, including adverse reactions and increased healthcare costs, making them less feasible in primary healthcare settings.

In recent years, advancements in endoscopic techniques have led to the development of non-anesthetic painless colonoscopy methods, aimed at improving patient comfort while maintaining diagnostic accuracy. The single-operator axial shortening technique has emerged as a promising approach, allowing for efficient and less painful colonoscopic examinations.

This study evaluates the application of non-anesthetic painless colonoscopy in a secondary hospital setting, focusing on its feasibility, patient comfort, and safety outcomes. By analyzing data from 7,106 patients, we aim to provide insights into the effectiveness of this technique and its potential for widespread implementation in grassroots healthcare institutions.

Materials and Methods

Research Objects

There were 4788 males and 2218 females in this group. The age range is 3 to 84 years old, with an average age of 51 years. 60% of patients sought medical treatment due to lower abdominal pain, diarrhea, constipation, and hematochezia. 34% of patients visited for health checkups, and 6% of patients visited for endoscopic treatment for intestinal diseases.

Method

Single operation-shaft retaining shortening method Fully communicate with patients about colonoscopy diagnosis and treatment to gain patients 'trust and cooperation. The patient is placed in the left recumbent position, and first has a digital anal examination and anal dilation to prevent anal contraction. Insert the endoscope into the sigmoid colon and change to the supine position until the end of the examination. For a small number of people who have difficulty in inserting the lens, such as those who are too thin or those who have intestinal adhesions during

abdominal surgery, change the left supine position, and right supine position until the lens insertion is successful and then change to the supine position.

Lubricating oil should be applied to the tip of the colonoscope when inserting the endoscope. The operator holds the endoscope operating part in his left hand and controls the coordinated movement of the upper and lower angle knobs. In addition, suction and air supply are used to adjust the amount of intestinal air. The surgeon holds the distal part of the colonoscope in his right hand, at least 25cm away from the anus. Move the endoscope shaft back and forth and rotate the scope left and right, gradually insert the endoscope deeply into the ileocecal part, and then enter the terminal of the ileum. Generally, the mirror depth is about 80cm. When the insertion of the endoscope is not smooth, abdominal compression is used to allocate the intestine [2]. to facilitate the smooth insertion of the entero scope. After reaching the end of the ileum, slowly withdraw the scope and carefully observe the condition of the intestinal mucosa for at least 10-15 minutes.

Results

Table 1: Status of Colonoscopy

complete the examination (enter the scope to the terminal ileum)	99.92% 7100 cases/7106 cases
comfort of the examinee	99.63% 7080 cases/7106 cases
Subject's pain	0.13% 9 cases /7106 cases
complications: Delayed bleeding (3-5 days after polyp treatment, due to fatigue)	1.2% 5 cases /426 cases
serious complications: Intestinal perforation, mesenteric tear	0
time taken for simple inspection	average of about 20min

Detection Status of Intestinal Diseases

About 30% of the subjects were examined for various intestinal diseases, such as colorectal cancer, small intestine cancer, various intestinal inflammation, intestinal ulcer, ulcerative colitis, hemorrhagic enteritis, ischemic bowel disease, chronic appendicitis, large intestine polyps, interstitial diseases, intestinal diverticulum, vascular malformations, etc. Among them, large intestine polyps are the most common, accounting for 50%.

Discussion

Previous gastrointestinal endoscopy was a painful examination, and the fear it had on patients was long-term. Although the current rapid anesthesia technique without intubation has been fully used in gastroenteroscopy, due to some adverse reactions, such as dizziness and severe vomiting, a small number of patients undergoing gastroenteroscopy experience severe abdominal pain and even sweating profusely after awakening from anesthesia., also brings psychological shadow to patients. We still have a lot of work to do on how to perform safe and comfortable endoscopic diagnosis and treatment.

All patients in this group were examined while awake. The vast majority of patients did not feel obvious pain during the examination. Many patients lamented after surgery that it was much easier and more comfortable than gastroscopy. Our experience is:

Careful pre-operation communication, with doctors and nurses discussing relevant details with the patient to eliminate the patient's terror.

The operation should be gentle and the technique should be light and skillful. Because it is a single operation, the movements of both hands must be coordinated, and the left hand upper and lower angle knob, the right-hand lens entry and left mirror rotation cannot be violent, especially if the mirror body rotates as soon as possible. Try to keep the axis of the endoscope straight and avoid overstretching the intestine. Keep a minimum distance of 25cm from the anus when holding the mirror in your right hand. Pay attention to withdrawing the scope frequently to ensure that the shaft keeps the intestine shortened, which is also conducive to releasing the loop.

Air suction. We use CO2 gas as enteral gas. Because it is absorbed quickly, the accumulation of trachea in the intestine is significantly reduced after continuous suction. Excessive use of air injection, such as not paying attention to suction, not only makes it difficult to insert the endoscope, but is also a major factor in postoperative abdominal pain in patients. Therefore, the use of air should be avoided.

Body position, Japanese scholars mainly preferred the left recumbent position. When we intubated, the left recumbent position reached the sigmoid colon and changed it to the supine position until the end of the examination. For some special patients, body positions should be changed repeatedly, such as left recumbent position, supine position, right recumbent position, etc.

Abdominal cushion compression method. For some people who are too fat, too thin, or have intestinal adhesions during abdominal surgery, the assistant should press with both hands-on different parts of the abdomen to facilitate smooth entry into the endoscope.

Cultivating highly skilled assistants [3]. especially nurses, can make the work of the endoscopist much smoother, the success rate of the operation will be significantly improved, and patient safety can be more guaranteed. The patient's pain will be significantly reduced and comfort will be improved. We met a patient who was highly sensitive to pain. He cried out for pain during anal examination, and also cried out for pain when inserting the lens. He kept crying out for pain while continuing to enter the

lens, and finally stopped the examination when he entered the descending colon. Such patients need to be examined under anesthesia.

Generally, the scope depth is about 80cm to reach the ileocecal area, otherwise the intestine may be overstretched. The lens entry time is 12±3 minutes. Remove the mirror slowly and observe the intestinal mucosa for 10-15 minutes. For intestinal water and feces (fragments), rinse (add water) and absorb it clean to keep the field of vision clear to prevent missing subtle lesions, which is especially beneficial for examination of large intestine polyps. We have done a lot of leak detection work for large intestine polyps.

Endoscopic treatment using the shaft shortening method can also achieve a free, comfortable and safe state. For larger coarse-based polyps, nilong rope is needed to tie the pedicles, and for broad-based lateral polyps, EMR is performed in stages.

Using the shaft-holding shortening method to operate colonoscopy has high safety, reduced pain, and low cost. It is conducive to improving patients 'awareness of the importance of colonoscopy and not delaying the diagnosis and treatment of diseases due to fear. In particular, it can attract "healthy people" over the age of 30 to have regular physical examinations with colonoscopy. It is more conducive to the prevention and treatment of colorectal cancer and improving people's health.

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