

The Application Effect of High Quality Nursing Service in the Painless Gastroscopy Examination

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ABSTRACT Objective: To discuss the application effect of high quality nursing service in the painless gastroscopy examination. **Methods:** Selected 132 cases of patients with gastrointestinal tract disease admitted by my hospital from May 2012 to May 2013 as the research object, 132 cases of patients with gastrointestinal tract disease were all given painless gastroscopy examination, clinically, all of them were given high quality nursing service. Observed and recorded nursing effect. **Results:** Among 132 cases of patients, there were 3 cases appeared untoward effect such as choking cough, respiratory depression, abdominal pain, low blood pressure and other adverse reactions, the adverse reaction rate was 2.27% (3/132); 0 cases of hospital infection; 132 cases all had side effects of propofol (dizzy giddy, hands and feet became limp, but no case of fell down; 131 patients were satisfied with high quality nursing service, the satisfaction rate was 99.2% (131/132). **Conclusion:** The application effect of high quality nursing service in painless gastroscopy examination was remarkable.

KEYWORDS

Painless gastroscopy
Gastrointestinal tract
Nosocomial infection

1. Introduction

The digestive system is the important component system of the human body, the main organs include the oral cavity, pharynx, esophagus, stomach, duodenum, jejunum, ileum, cecum and ascending colon, transverse colon, descending colon, sigmoid colon and rectum. The high incidence areas of disease were the esophagus, stomach, duodenum, rectum and colon sigmoideum, the major diseases were inflammation, ulcer, tumor, etc. The clinical manifestation of digestive system disease was more complicated, it was difficult to judge clearly, we should implement relevant inspection timely [1]. There were various examination ways of diagnosis for digestive system diseases, such as ultrasonic examination, the fiber stomach examination and X-ray barium meal examination and so on. Due to (1) fiber stomach examinations were invasive operation, in addition, there are lots of infection source in hospital, if

disinfection and sterilization of gastrointestinal endoscope and its associated things are not strict, it is easy to cause nosocomial infection; (2) the stomach tube looks coarser and longer, patients do not understand the checking process, often appear untoward effect such as nervous, fear, doubt, nausea, high blood pressure and so on; (3) "painless stomach" is an operation process that gastrointestinal endoscope examine intravenous sedation and (or) painkillers before operation and during operation, there is a certain risk; (4) patients are lack of knowledge of preparation before examination and matters need attention after examination for painless gastroscopy. So when check painless gastroscopy, there is higher requirements for nursing service. Therefore, when do painless stomach examination for patients, it is necessary to strengthen and optimize the related nursing service. This study gave "patients with painless gastroscopy examination" high quality nursing service and achieved satisfied results, reported as follows.

2. Data and methods

2.1. Clinical data

Selected 132 cases of patients with gastrointestinal tract disease admitted by my hospital from May 2012 to May 2013 as the research object, 79 cases were male, 53 cases were female; Ages were between 18 and 84 years old, the average age was 48.8 ± 5.3 years old; there were 26 cases of which the esophageal gastrointestinal were normal, 76 cas-

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es with inflammation of the digestive system, 20 patients with peptic ulcer, 10 cases with digestive system tumors. There was no serious lung disease among the 132 patients, all patients' accepted painless gastroscopy examination.

2.2. High quality nursing methods

2.2.1. High quality nursing before examination

Inform Patiently explain the difference between painless gastroscopy and common gastroscopy in examination methods, principles, advantages, painless, safety and risk. To focus on introducing successful cases for anxious and nervous patients, to alleviate their nervous and anxious mood; If taking non-steroidal anti-inflammatory drugs and platelet aggregation drugs (e.g. aspirin), contact physician and stop drugs between 7 and 10 days before doing gastrointestinal examination according to the disease situation ; when do examination, they must be accompanied by family members; diabetic patients prepare candy by themselves, take them when necessary; Do gastrointestinal endoscopy 3 days after barium meal; Women don't make up; Instruct patients to give up smoking and drinking.

Know about the patients' medical history in detail

For example, patients with obviously abnormal cardio-pulmonary function, organic disease, respiratory sleep suspended syndrome, obvious obesity, stubby neck and de-hisce difficulty should not be treated with painless gastroscopy examination; patients with medical history of high blood pressure and heart disease, older and fat patients should take blood pressure and electrocardiogram (ECG) as a reference; whether women were in pregnancy; whether there were any allergies and asthma; whether there were acute or chronic infectious diseases; whether there was bleeding tendency, did routine blood test when necessary.

Abrosia before operation

Gastrointestinal endoscopy implemented in our hospital by dividing time section (stomachoscopy examination in the morning, colonoscopy examination in the afternoon), eat light diet at dinner before gastroscopy day, prohibit diet 6h before examination, do gastroscopy in the morning.

Eat low-residue diet one day before painless colonoscopy examination

Don't eat on the check morning, drink 2000–3000 mL warm water (drink water every 10 min, 400 mL at each time) within an hour after drink 500 mL mannitol of 20%, clean the intestinal tract fully, until the shit become water sample, ambrosia at noon, do painless colonoscopy examination in the afternoon, and accompanied by family members.

Keep checking the exam room temperature and humidity in the room

Keep cleaning and disinfection room well ventilated, to

avoid the respiratory tract mucosa of medical staff and patients to be corroded by glutaraldehyde and chlorine disinfectants.

Inform the patients and family members the risk of painless gastroscopy examination

Sign the agreement; prepare for gastrointestinal endoscope, light source host and negative pressure suction device, install gastrointestinal endoscope, check the function of plenum and water supply, view the absorbing status, prepare for another draw line, keep the lasting negative pressure state for a rainy day. Prepare for the sterile biopsy forceps, specimen bottle of alcohol of 95%. Prepare items such as mat towel, sterile kidney basin, ring of ports, sterile gauze, toilet paper, disposable gloves, and lubricants and so on. In order to ensure the patients' safety, the examination room should be equipped with rescue vehicles, emergency medicine, central oxygen supply device, multi-functional monitor, etc.

Prevent nosocomial infection

Before examination, the gastrointestinal endoscope to be used for a high level disinfection for 20 minutes again, rinse and dry them for patients, inject sterile water into water bottles, and change them every day.

Check the name, age, sex, weight, inspection item, etc. Check whether all kinds of equipment are ready before operation.

2.2.2 The high quality nursing care on examination

The position of painless gastroscopy

(1) Remove denture, glasses, accessories, watches, mobile phones and other personal effects, help patients to take the left lateral position, the left shoulder is backwards, the right shoulder is forward, the two legs are slightly bent, keep the body leaning forward, loosen abdominal muscle, loosen the belt and collar, ask the patients to lean their heads slightly forward, mouth is downward, to facilitate the excreta to discharge, mat towel under jaw, put bending plate and ring of ports on the mat towel.

(2) The position of painless colonoscopy: remove denture, glasses, accessories, help patients to take the left lateral position, loosen abdominal muscle, and take off pants to the knee, to reveal the anus. Bend the legs into 90 degrees to the body, mat mat towel under hips, prepare two pieces of sterile gauze, lubricants (dimethyl silicone oil), shield by screen, before the formal inspection, check whether the equipment is completely accurate again.

Transfusion and drug delivery

Set up intravenous infusion channel, ensure the sedative and analgesic drugs can smoothly enter the body, and prevent leakage. Inform patients' propofol can stimulate blood vessels, it will cause slight pain on the injection site. Generally adult patients who are less than 55 years old, whose

cardiopulmonary function is better should be adjusted dosage with the injection speed of 4 mL (40 mg)/10 seconds.

Inhale oxygen

Let patients inhale oxygen 2–3 L/min by nasal catheter.

Fixed

When do painless gastroscopy examination, put and fix “bite” well as the patients are awake, to avoid appearing the phenomenon of “under out” prolapse, “bite mirror”. One of the nurses and doctors fix the ring of ports, the other fix right upper limb, to prevent the ring of ports and infusion needle tubing falling off.

Cooperate with operation essentials

When cooperate with the doctor to do the colonoscopy, on smear a few dimethyl silicone oil on the sterile gauze to lubricate the anus and coloscope in turn, the movements should be gentle, careful and meticulous, to avoid puncturing the intestinal wall, cooperate the performer to find cavity and into the mirrorfor (insert directly), which is the basic principle of colonoscopy operation, that is to say see enteric cavity in the field of vision then insert colonoscope, or pull back to find cavity again. Because the sigmoid colon are divided into three types: “N” shape, “alpha”shape and “P”shape, when plug to the sigmoid colon, cooperate the doctors to master behavioral essentials, pay attention to the inserting action which is appropriate to take mucosa glissade method (methods applied through sharp bowel), when reach the splenic flexure, sometimes change to the horizontal position and right lateral decubitus, make splenic flexure angle dull; Sometimes use the method of the abdominal wall pressure (nurses squeeze under left side to bottom left on patients’ abdominal wall to add pressure) to prevent the sigmoid colon ring; Insert to the hepatic flexure, sometimes use the method of the abdominal wall pressure (nurses squeeze patients’ abdominal wall umbilical to right upper quadrant to add pressure) to prevent colon transversal stretching down.

Observe closely

on examination if the patients appear the phenomenon of glossocoma, laryngospasm, temporary breathing cardiac arrest, their underjaw need to be immediately lifted up and forward, to keep the airway unobstructed, clear oral secretions in time; Closely observe vital signs of the patients, implement multifunctional guardianship, if patients’ heart rate, blood pressure and oxyhemoglobin saturation are abnormal, cooperate with the doctors for treatment in time. For patients who are unconscious during operation, the nurse should pay special attention to prevent falling down from bed. Pay attention to keep patients warm.

Cooperate with the doctor to take biopsy tissues accurately, vertically and rapidly, the biopsy forceps cannot be

buckled too tightly, to avoid switches out of order; clamp the scraps of paper by hemostatic forceps, put the tissue block on a little pieces of paper, then put into solution vial of alcohol of 95%, paste the label, confirm it is correct, and inspect immediately.

2.2.3 Give high quality nursing after examination

Wake up the patients timely

Generally patients will continue to sleep after painless gastroscopy examination, we should pat patients’ hips and shoulders slightly and regularly, cooperate with the anesthesiologists to awaken patients in time, make patient open their eyes, answer to the point, to determine the patients are awake.

Arrange for patients

Finish painless gastroscopy examination and after patients awake, accompany with anesthesia doctors to send patients to the recovery room, closely observe vital signs, keep the patients lying on the back or lying on the side, head leans to one side, lest oral secretion enter the airway and cause respiratory failure; if there are phenomenon of low blood pressure, arrhythmia and awakening restore delayed, notify the doctor in time. After patients are sober fully, monitor and venous channels shall be removed. Ask patients if they have the feeling of dizziness, hand and foot is soft, activities are as usual when get out the bed, and they can leave the recovery room accompanied by family members.

Notice for patients

Patients should be accompanied by family members in 3h after examination, ask patients not to drive on the same day, not to ride a bike, not to work high above the ground, not to make important decisions; they can drink water and eat something 1 h after examination, eat digestible semi-liquid diet or soft rotten food 1–2 d after examination; avoid to eat raw, hard, extreme cold, extreme heat and irritated food, forbid smoking, alcohol, espresso and strong tea. After painless gastroscopy examination, there may be short sore throat, foreign body sensation, patients often have the reflection of coughing up secreta, advise patients not to cough up secreta reluctantly, lest cause mucosal damage, hold lozenges in the mouth when necessary, to alleviate the symptoms, don’t be panic, it will be relieved after having light diet for a few days.

Disinfection treatment

(1) After gastrointestinal endoscope finished, nurses in endoscopy room should strictly according to the “operation specification of endoscope cleaning and disinfection technical (2004 edition)”, after clean and disinfect with flowing water immediately (soak gastrointestinal endoscope with alkaline glutaric dialdehyde of 2% for at least 10 minutes) swash again, dry the air gun for the next patient; Clean the mouth ring, then soak and disinfect with chlorine-contain-

ing disinfectant which contain 500 mg/L of available chlorine for 30 min, then swash for the next patient; gastrointestinal endoscopes which aren't used on that day, should be done high-level disinfection with alkaline glutaraldehyde of 2% to , the sterilization time should be extended to 30 min; at the end of daily clinical work, wash and dry all the disinfected pipes in the endoscope with ethyl alcohol of 75%, store in the special clean cabinet, the lens body should be hung [2].

(2) After finishing the daily diagnosis and treatment work, clean and disinfect suction bottles, suction tubes, purge tank, enzyme washing tank and washing tank. Soak and disinfect water bottles and connecting pipes with chlorine disinfectant which contains 500 mg/L of available chlorine for 30 min, then wash down residual disinfectant thoroughly with sterile water, dry for standby application, the water inside the bottle is sterile water, change every day.

Concentration, monitoring and the notes

Do biological monitoring for gastroscopy once every quarter, (the standard is: the total number of bacteria is less than 20 cfu/parts, no pathogenic bacteria) [2]; clean biopsy forceps immediately after using them, sterilized by high pressure, sterilize them after using, if they are not used, appropriate to be sterilized once a week, to ensure that they are sterile for standby; Enzyme solution (dilute according to the proportion of hand washing of 1:200) soak and wash for 2–10 minutes, the temperature is between 30 and 50 degrees, a patient replaces enzyme solution once; under non-pollution circumstance, alkaline glutaraldehyde disinfectant of 2% should be changed once every two weeks, monitor once a day (test with test card of glutaraldehyde concentration of 2%, observation time is 5–8 minutes, the qualified concentration can make the test card change from white to uniform yellow); Chlorine disinfectants (available chlorine content is 500 mg/L) change and monitor once a day, ensure the concentration of disinfectant qualified; disinfect the examination room and disinfect room for one hour a day by the exposure of the ultraviolet rays (directly shine the surface of the objects, irradiation distance is less than one meter, when there are someone, they not be disinfected with ultraviolet lamp, to avoid damaging eyes and skin), monitor irradiation intensity of ultraviolet lamp once every six months, if radiation intensity of the engaged modulator tube is less than 70 W/cm² or the use time is more than 1000 h, we should replace ultraviolet ray tube; replace oxygen humidifier and tourniquet for everyone once, clean used oxygen humidifier and tourniquet, then soak in chlorine disinfectants (available chlorine content is 500 mg/L) for 30 minutes, cleaned with fresh water, dried in the air, save closely for standby application; Iodine volts cans, iodine volts disinfectant (5 g/L) should be changed twice a week.

Correctly handle medical wastes, for example, infectious

waste should be put into a special yellow bag which has warning mark and defend seepage, close the opening when it is 3/4 full; the used sharp instrument should be stored in special yellow sharps box which defend seepage and is durability, close the locks when it is 3/4 full, to prevent injury from the sharp instruments, the temporary storage time is less than 2 days, perform hand-over procedure, to prevent hospital infection.

Do a good job of endoscope cleaning and disinfection registration

(1) Names of clinic patients, using endoscopic number, cleaning time, sterilization time and operator's name; (2) Daily ultraviolet disinfection time; (3) Replace daily disinfectant (chlorine disinfectants of 500 mg/L, glutaraldehyde of 2%) and monitor its concentration; (4) Wipe quartz burner with alcohol of 75% every week and record it; (5) Biological monitoring results of gastrointestinal endoscope every quarter; (6) Monitoring results of irradiation intensity of ultraviolet lamp every six months. (7) Insure hygienic regulation of hand, to prevent hospital infection.

2.3. Observational index

Adverse reactions indicators: choking cough, respiratory depression, abdominal pain, low blood pressure; hospital infection cases; accidental injury cases; satisfaction rate of questionnaire patients for nursing service, there are two options: satisfied and unsatisfied.

3. Results

Among 132 cases of patients, there were 3 cases appeared untoward effect such as choking cough, respiratory depression, abdominal pain, low blood pressure and other adverse reactions, the adverse reaction rate was 2.27% (3/132); 0 cases of hospital infection; 132 cases all had side effects of propofol (dizzy giddy, hands and feet became limp, but 0 case fell down; 131 patients were satisfied with high quality nursing service, the satisfaction rate was 99.2% (131/132).

4. Discussion

Although there are more methods of examining and diagnosing digestive tract diseases on clinic, gastrointestinal endoscopy is the most widely used technology, especially the rise of technology of painless gastroscopy examination in recent years. Because there is small trauma and no pain for patients, explicit determination for digestive disease, get more and more favors from patients [3]. But because (1) fiber stomach examination is belong to invasive operation, in addition there are more hospital infection, if the disinfection of gastrointestinal endoscope and its associated matters is not strict, it is easy to cause nosocomial infection; (2) the fiber gastroscopy tube looks thicker and longer, patients do not understand the inspection process, often appear adverse reactions of nervous fear, doubt, nausea, high blood pressure and so on; (3) "painless gastroscop-

py” is an operation process of which intravenous sedation and (or) pain killer before and during digestive gastrointestinal endoscopy operation, there is a certain risk; (4) Patients are lack of knowledge about notes before and after painless gastroscopy examination. Therefore, when implement painless gastroscopy examination, need to strengthen the nursing service.

High quality nursing service is a new type of nursing mode, it changes the past nursing pattern of “disease-based learning” to “patient-centered”, strengthen the basic nursing, deepen the connotation of nursing work, fully implement the nursing responsibility system, so as to improve the overall level and quality of nursing service. The concept of “Patient-orientated” is that all nursing work should put patients in the first place, think the interest for patients everywhere, closely around the needs of patients, develop simple, clear steps of the nursing measures, make the nursing process more simplified, effectively control the nursing cost, so as to provide patients with medical service which is “low consumption, high efficiency, high quality, safe and satisfied” [4].

Among 132 cases of patients in this study, the adverse reaction rate was 2.27% (3/132); 0 cases of hospital infection; 132 cases all had side effects of propofol (dizzy giddy, hands and feet became limp), but 0 case fell down; the satisfaction rate of patients for nurses was 99.2% (131/132). The research showed that providing high qual-

ity nursing service during implementing the painless gastroscopy examination for patients, can reduce the incidence of patients’ adverse reactions, effectively prevent hospital infection, ensure the safety of the patients, made patients know the preparations before preparation and notes after checking, relieved the patients’ pain, really made patients be at ease, eliminated patients’ nervous, doubts and fears mood, regain their health as soon as possible. Reflected the people-oriented, health-oriented, improved the relationship between nurses and patients, improved the recognition degree and satisfaction rate of the patients for painless gastroscopy nursing service, and further enhanced the good image of the “relieved hospital” in patients’ heart.

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