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Nursing Experience of Gastroscopy and Colonoscopy in an Elderly Patient Under Non-Intubated General Anesthesia: A Case Report Post-Print

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Abstract

This article summarizes the nursing experience of a case of an elderly patient undergoing gastrointestinal endoscopy under non-intubated general anesthesia, encompassing targeted nursing measures including indications and contraindications for painless gastrointestinal endoscopy, preoperative psychological nursing, instrument preparation, dietary nursing care, intraoperative nursing cooperation, and postoperative nursing care. Through a comprehensive nursing model featuring adequate preoperative preparation, close intraoperative cooperation, and meticulous postoperative nursing care, the success of gastrointestinal endoscopy under non-intubated general anesthesia in elderly patients is ensured, patient pain is alleviated, patient conditions are improved, and the diagnostic and therapeutic efficacy for gastrointestinal diseases as well as nursing satisfaction are enhanced.

Full Text

Nursing Experience of Gastrointestinal Endoscopy in an Elderly Patient Under Non-intubated General Anesthesia: A Case Report

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Abstract

This paper summarizes the nursing experience of gastrointestinal endoscopy in an elderly patient under non-intubated general anesthesia, including targeted nursing measures such as indications and contraindications for painless endoscopy, preoperative psychological care, equipment preparation, dietary management, intraoperative nursing cooperation, and postoperative care. Through a comprehensive nursing model with thorough preoperative preparation, close intraoperative coordination, and meticulous postoperative care, we ensured the successful completion of the procedure, alleviated patient pain, improved clinical outcomes, and enhanced both diagnostic efficacy and nursing satisfaction for elderly patients with digestive diseases.

Keywords: non-intubated general anesthesia; elderly patients; gastrointestinal endoscopy; nursing care

Introduction

With advances in endoscopic and anesthetic techniques, painless gastrointestinal endoscopy has gained widespread application in clinical practice. An increasing number of gastrointestinal diseases can now be diagnosed through this procedure, making it an important diagnostic tool for clinicians. Due to age-related physiological decline and reduced compensatory capacity, elderly patients particularly benefit from painless endoscopy, which minimizes discomfort and pain during examination. Painless gastrointestinal endoscopy performed under sedation represents a significant advancement in diagnostic and therapeutic technology, allowing procedures to be conducted in a comfortable, pain-free state.

In recent years, changing dietary patterns have led to a rising incidence of gastrointestinal diseases, making endoscopic examination an essential diagnostic and therapeutic modality. Because it causes minimal negative stimulation and is non-invasive, painless gastrointestinal endoscopy has become highly favored by patients. High-quality nursing care during these procedures can effectively improve clinical outcomes, reduce complication rates, enhance nurse-patient relationships, and increase patient satisfaction. This article summarizes our nursing experience with an elderly patient undergoing non-intubated general anesthesia for gastrointestinal endoscopy.

Case Presentation

The patient was an elderly male who presented with abdominal pain, bloating, and other digestive symptoms. He had a history of gastric ulcer and colon polyps. To clarify the diagnosis and perform follow-up endoscopy, he was admitted from the outpatient clinic. The patient had no history of colorectal surgery, coagulation disorders, or thrombocytopenia. He had not taken non-steroidal anti-inflammatory drugs or antiplatelet agents within one week prior to admission and had no malignant lesions in other organ systems. The patient

successfully underwent gastrointestinal endoscopy under non-intubated general anesthesia as per medical orders.

Nursing Methods

Indications and Contraindications for Painless Gastrointestinal Endoscopy

Indications include: (1) All patients requiring diagnostic or therapeutic endoscopy who are willing to accept anesthesia; (2) Patients with anxiety, fear, or hypersensitivity who cannot control their movements during the procedure; (3) Patients in good general condition (ASA Class I-II); and (4) ASA Class III patients with stable conditions who can be closely monitored during the procedure.

Contraindications include: (1) Patients with conventional endoscopic contraindications or who refuse anesthesia; (2) Uncontrolled life-threatening cardiovascular or respiratory diseases (ASA Class IV); (3) Gastrointestinal bleeding with shock, severe anemia, or gastrointestinal obstruction with gastric content retention; (4) Patients without accompanying guardians; and (5) Patients with anesthetic drug allergies or other severe anesthetic risks.

Preoperative Psychological Care

Most elderly patients experience anxiety and fear before painless gastrointestinal endoscopy due to age-related physiological decline and reduced adaptability. Some patients have difficulty cooperating, while others harbor doubts about the procedure or worry about potential complications. Nursing staff should explain the examination method, precautions, and potential adverse reactions using reassuring language to gain patient and family cooperation, eliminate tension and fear, listen carefully to patient concerns, and stabilize emotions. Targeted interventions for negative emotions can improve comfort, reduce postoperative complications, and increase satisfaction among elderly patients undergoing endoscopy.

Preoperative Preparation

Dietary Management: Patients should consume a residue-free semi-liquid diet (such as porridge or noodles) for three days before the examination, avoiding meat, vegetables, and seeded fruits (e.g., dragon fruit, kiwi). On the examination day, patients must fast. For those with severe hunger or diabetes, oral or intravenous glucose may be administered as appropriate.

Bowel Preparation: Polyethylene glycol electrolyte powder (PEG) is the most commonly used bowel cleansing agent in China. This medication effectively cleanses the bowel by eliminating excess digestive fluids without affecting intestinal absorption or secretion, thus avoiding water and electrolyte imbalances. For patients with constipation, senna leaf tea may be administered three days

before the examination to enhance cleansing effectiveness. To improve palatability, patients may drink 1,000 mL of orange juice while taking the PEG solution. Nurses should provide a measuring cup and instruct patients on proper administration. Specifically, patients consume a liquid diet the day before the procedure, fast after dinner, and take 2-3 boxes of PEG solution divided into multiple doses. This divided approach reduces impact on gastrointestinal and cardiopulmonary function in elderly patients and improves acceptance. Water temperature should be maintained at 35-37°C, as excessively cold or hot water may cause gastric discomfort or abdominal pain, and hot water may be lost through sweat rather than accumulating in the gastrointestinal tract. If patients experience severe bloating or discomfort, they may slow the intake rate or pause temporarily until symptoms resolve before continuing until clear watery stool is achieved. Patients may also engage in light ambulation after taking the laxative, as physical activity is a protective factor that enhances medication absorption.

Preoperative Assessment: Given the physiological and pathological characteristics of elderly patients, the risks associated with painless endoscopy increase with age. Preoperative assessment includes inquiring about contraindications and medication history, monitoring vital signs, reviewing ECG reports, complete blood count, coagulation profile, and preoperative screening tests. Patients taking anticoagulants must discontinue them for 1-2 weeks under medical supervision before the procedure. Informed consent must be obtained.

Equipment Preparation: All equipment including anesthesia machines, monitors, defibrillators, and bedside ultrasound should be checked and confirmed to be in standby condition. Prepare anesthesia breathing circuits, oxygen masks, nasal cannulas, endotracheal tubes, laryngoscopes, bite blocks, syringes, stylets, lidocaine cream, suction devices, airway adjuncts, resuscitation bags, oxygen equipment, and oral airways. Commonly used anesthetic drugs such as propofol, etomidate, midazolam, and opioids should be readily available, along with cardiovascular medications including atropine, ephedrine, and norepinephrine.

Patient Education: In addition to verbal instructions, nurses guide patients or family members to scan a QR code to join a WeChat group where targeted information about endoscopy, bowel preparation, fasting, and appropriate attire is shared through text and images.

Intraoperative Nursing Cooperation

Assist the patient into a left lateral decubitus position with knees flexed, loosen clothing, protect privacy, and minimize exposure. Administer oxygen and cardiac monitoring. The endoscopy center should have all resuscitation equipment and medications readily available. Reconfirm patient identity and verification of all test results to ensure no contraindications exist. Assist with oral defoaming agent administration and ensure the bite block is properly secured while the patient is still conscious to prevent displacement during the procedure. Assist the endoscopist with gentle intubation and continuously monitor vital signs. En-

sure intravenous catheters are properly secured for smooth drug administration, with medication labels clearly identifying drug names and doses, and adjust infusion rates as appropriate. Routine monitoring includes ECG, respiration, blood pressure, and pulse oximetry, with end-tidal CO_2 monitoring when available.

Postoperative Care

After the procedure, assist the patient to a comfortable position, help with dressing, and transfer to the recovery room for monitoring. Closely observe blood pressure, heart rate, oxygen saturation, mental status, and presence of nausea or vomiting. After 30 minutes of recovery, if vital signs are stable, consciousness has returned to normal, gait is stable, and there is no dizziness, nausea, vomiting, or significant abdominal pain, the patient may leave the recovery area accompanied by family.

Patients may consume liquid foods and water 2 hours after returning to the ward. Those without special treatments may eat light, easily digestible food after 4 hours. Patients who underwent polypectomy should fast or consume only warm liquid diet depending on the extent of resection. Patients should rest appropriately after the procedure—generally 30 minutes of bed rest for those without special treatment, and 24-48 hours for those undergoing endoscopic therapy. Patients should avoid strenuous exercise, heavy lifting, and long-distance travel within one week.

Follow-up

One week after discharge, patients receive a telephone follow-up to inquire about abdominal pain, bowel movements, and dietary status. For patients who underwent polypectomy, regular follow-up endoscopy is recommended based on pathology reports.

Outcome and Discussion

The patient successfully completed gastrointestinal endoscopy under non-intubated general anesthesia. Endoscopy revealed non-atrophic gastritis and colonic melanosis. Postoperative vital signs remained stable, consciousness returned to normal, and the patient experienced no discomfort, returning safely to the ward under escort.

Painless gastrointestinal endoscopy has become widely used in clinical practice with high diagnostic accuracy. With improved equipment and techniques, an increasing number of elderly patients choose this procedure, which is highly effective and well-accepted. High-quality nursing care helps reduce extubation time and recovery complications in general anesthesia patients. Due to age-related physiological decline, elderly patients have reduced tolerance and increased psychological stress, often experiencing anxiety and fear. This case demonstrates that implementing comprehensive preoperative and postoperative nursing care

for elderly patients undergoing gastrointestinal endoscopy effectively delivers high-quality nursing services.

Conflict of Interest Statement

The authors declare no conflict of interest.

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