Nursing Experience of a Case of Endoscopic Thyroid Surgery via Transoral Vestibular Approach

Authors: Xinyu Wang, Zhang Lei, Zhang Lei

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Abstract

This article summarizes the nursing experience for a patient undergoing transoral vestibular endoscopic thyroid tumor resection, including preoperative visit, intraoperative assistance, and postoperative nursing care and surgical coordination. Transoral endoscopic thyroidectomy via the oral vestibule approach offers advantages of minimal bleeding, small incision, fewer complications, safety, and convenience; furthermore, this procedure avoids visible body surface scarring, yielding significant cosmetic benefits. Simultaneously, nurses' provision of psychological care, accurate instrument passing, and strict aseptic technique are crucial for the successful completion of this surgery.

Full Text

Nursing Experience in a Case of Transoral Vestibular Approach Endoscopic Thyroid Surgery

Dongfang Hospital, Beijing University of Chinese Medicine
Wang Xinyu, Zhang Lei

Abstract

This article summarizes the nursing experience for a patient undergoing transoral vestibular endoscopic thyroid tumor resection, encompassing preoperative visits, intraoperative cooperation, and postoperative nursing care. Transoral endoscopic thyroidectomy via the oral vestibular approach offers advantages including minimal bleeding, small incisions, fewer complications, safety, and convenience. Moreover, this procedure avoids visible scarring on the body surface, providing significant cosmetic benefits. Simultaneously, nurses' diligent psychological care, accurate instrument passing, and strict aseptic technique are crucial for the successful completion of the surgery.

Keywords: Surgery; Endoscopic thyroid; Nursing experience

With the continuous development of social and cultural environments and the accelerating pace of life, populations remain in a suboptimal health state characterized by poor lifestyle habits, irregular diets, nutritional imbalances, smoking, alcohol consumption, excessive work pressure, and negative emotions, leading to a year-by-year increase in thyroid cancer incidence. Thanks to the widespread adoption and implementation of ultrasound examinations, thyroid cancer can be detected and treated early. As the thyroid gland is located in the anterior neck, postoperative scars are not easily concealed, making the aesthetic and tactile disadvantages of traditional surgical approaches increasingly apparent. With the continuous advancement of endoscopic surgery, its advantages of minimal trauma, mild pain, rapid recovery, and no visible surface scarring have gained increasing recognition among medical professionals and patients while ensuring surgical safety and treatment efficacy[1]. Due to its benefits of minimal bleeding and a clear surgical field, it enables more thorough lymph node dissection while reducing complications such as recurrent laryngeal nerve injury. In 2022, our hospital performed its first transoral endoscopic thyroid surgery. As a novel surgical approach, it has been successfully applied to multiple patients.

1. Clinical Data

The patient was a 33-year-old unmarried male who discovered thyroid nodules during a physical examination and subsequently sought diagnosis and treatment at our hospital. Thyroid ultrasound revealed a hypoechoic nodule measuring 0.8 cm × 0.8 cm × 0.6 cm in the right lobe and another hypoechoic nodule measuring 3.3 cm × 2.7 cm × 2.5 cm in the left lobe. The patient underwent transoral vestibular endoscopic thyroid adenoma resection under general anesthesia. Postoperatively, the outcome was favorable with low pain levels. The drainage tube was removed three days post-surgery, and the patient was discharged smoothly with high satisfaction.

2.1 Preoperative Nursing

To ensure smooth surgical proceedings, one day before surgery, according to the surgical notification, the nurse visited the patient' s ward to review medical records and contacted the attending physician and nurses to understand the patient' s general condition. The nurse introduced herself to the patient, explained the purpose of the visit, and described the general process from entering to leaving the operating room. The nurse inquired about the patient' s anxieties and concerns, providing appropriate nursing guidance based on specific issues. Disease-related knowledge was disseminated, and surgical outcomes of patients with similar conditions were introduced, using encouraging and comforting language as much as possible to build the patient' s confidence in recovery. The nurse reminded the patient of fasting time, removal of removable dentures and colored contact lenses, and prohibition of wearing jewelry, especially metal ac-

cessories. Makeup, lipstick, and nail polish were forbidden to avoid interfering with clinical observation[2]. After the visit, the circulating nurse returned to the operating room and, based on the obtained patient information, discussed with the scrub nurse and nursing team to develop nursing measures.

2.1.2 Preoperative Preparation

One day before surgery, surgical instruments were prepared according to nursing routines, and the surgical team was consulted regarding any special instruments needed to ensure all items were available. Equipment used during surgery included electrosurgical units, endoscopic instruments, carbon dioxide tanks, suction devices, and infusion pumps, all of which were ensured to be in functional condition before the patient entered the operating room.

2.2.1 Establishing Intravenous Access

After the patient entered the operating room, appropriate blood vessels were selected based on vascular conditions. Since surgery requires specific patient positioning and surgical draping obscures the intravenous access site, nursing staff cannot directly observe the puncture site. Additionally, pulling on the infusion line during patient positioning and changes can easily cause drug extravasation. Therefore, thick, straight, and well-filled veins in the upper limbs were generally selected, avoiding veins at valve sites and joints[3] to establish intravenous access, facilitating anesthetic administration and rapid fluid replacement.

2.2.2 Assisting with Anesthesia and Positioning

The nurse assisted the anesthesiologist with endotracheal intubation for general anesthesia. Since the surgery involves oral manipulation, the depth of tracheal intubation was carefully recorded, and the nurse assisted in securing the tube. Due to the limited experience with this procedure and uncertain nature of the tumor, making the exact surgical duration unpredictable, an indwelling urinary catheter was routinely placed. Care was taken to maintain catheter patency, with regular monitoring of urine output and color during surgery. The nurse assisted the surgeon with patient positioning: the supine neck hyperextension position was used, with soft pillows placed under both shoulders[4], allowing the head to hang downward. A silicone pad supported the neck to protect the cervical spine, while a horseshoe-shaped silicone headrest fixed the head and prevented occipital pressure. Additionally, silicone pads were placed at the sacrococcygeal region and ankles.

2.2.2 Assisting with Surgical Preparation

The nurse assisted surgical staff in gowning, exposed the patient' s surgical field, assisted the surgeon with disinfection, and ensured patient warming.

2.2.3 Instrument Placement and Settings

The display screen was positioned at the patient's head side, pneumoperitoneum pressure was set to 6–8 mmHg, and electrosurgical units, ligation devices, and other equipment were placed more than 30 cm from the surgical field on one side of the body, then powered on, connected, and tested.

2.2.4 Intraoperative Cooperation

The operating room temperature and humidity were adjusted to prevent intraoperative hypothermia, shivering, and surgeon discomfort. Lighting was adjusted according to surgical progress, supplies were provided as needed, and patient vital signs were closely monitored. All catheters and tubes were ensured to be patent. If medication or blood transfusion was required, strict verification protocols were implemented. Contingency plans for emergencies were prepared to assist the surgeon and scrub nurse in resuscitation efforts. The nurse supervised the surgeon, scrub nurse, and observing students in strictly adhering to aseptic technique, promptly reporting any contamination or suspected contamination to the lead surgeon for appropriate management or replacement.

2.2.5 Counting and Verification

Before surgery began, before closing the body cavity, and after completely closing the body cavity and suturing the skin, all used and unused items on the surgical table were meticulously counted and verified. The lead surgeon was notified upon completion of the count, and the verification was documented truthfully on the item checklist with signatures from both physicians and nurses.

2.3.2 Management During Anesthesia Recovery

During anesthesia recovery, patients may experience altered consciousness, restlessness, and struggling, which can easily lead to intravenous drug extravasation or dislodgement of indwelling catheters[5]. Therefore, nursing staff must strengthen management of patients during the recovery period, implement appropriate restraints, actively prevent complications, and enhance safety during anesthesia recovery[6].

2.3.3 Postoperative Transport

After the patient regained consciousness, the lead surgeon, anesthesiologist, and circulating nurse jointly escorted the patient safely back to the ward, promptly providing blankets for warmth.

2.3.4 Postoperative Follow-up

On the second day post-surgery, a follow-up visit was conducted. The patient exhibited good mental status, mild pain, normal temperature, and well-healed

wounds without exudate. The patient expressed satisfaction with the operating room services.

3. Discussion

Compared with traditional surgical approaches, transoral vestibular endoscopic thyroid surgery offers advantages including shorter operative time, less intraoperative bleeding, reduced total wound drainage, shorter postoperative pain duration, and lower complication rates[7]. The procedure not only yields good prognosis but also provides superior skin integrity and cosmetic outcomes compared to conventional methods. As the first case of transoral vestibular endoscopic thyroid surgery in our hospital, the patient received proactive and effective continuous nursing care throughout the perioperative period. Through preoperative visits, the nursing team understood the patient' s concerns about surgery, providing timely reassurance and guidance to ensure optimal psychological and physiological status. Strict aseptic technique was implemented intraoperatively, with close attention to the patient' s catheter status. Postoperative follow-up visits gathered patient feedback. Nursing measures were adjusted promptly based on issues arising during the perioperative period, promoting nurse-patient and physician-patient relationships and reducing medical disputes. In summary, implementing comprehensive continuous nursing care during the patient' s perioperative period enhanced patient satisfaction with and trust in nursing services, facilitated smooth surgical proceedings, and improved overall nursing workflow, making it worthy of broader application.

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Note: Figure translations are in progress. See original paper for figures.