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Analysis of the Effectiveness of Targeted Nursing Intervention in the Treatment of Secretory Otitis Media with Tympanocentesis

Bin Lu

The First Affiliated Hospital of Yangtze University, Jingzhou 434000, Hubei, China.

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***Corresponding author:** Bin Lu, The First Affiliated Hospital of Yangtze University, Jingzhou 434000, Hubei, China.

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Abstract

Objective: To analyze the clinical application effect of targeted nursing intervention in the treatment of secretory otitis media with tympanostomy. **Methods:** The observation period was selected from February 2025 to February 2026. During this period, 66 patients with secretory otitis media who underwent tympanocentesis in our hospital were selected as the observation subjects. They were divided into 2 groups (reference group and study group) based on the principle of different intervention plans, with 33 cases in each group. The reference group received routine care, and the research group received targeted care. The postoperative recovery and complications were compared between the two groups. **Results:** After nursing, the statistical time for hearing recovery, tinnitus disappearance, and middle ear effusion disappearance in the study group was shorter than that in the reference group (P<0.05); the overall incidence of postoperative complications in the study group was also significantly lower than that in the reference group (P<0.05). **Conclusion:** For patients with secretory otitis media treated by tympanocentesis, targeted nursing intervention can better promote their postoperative recovery and reduce related complications, and is worthy of promotion.

Keywords

Targeted nursing; tympanocentesis; secretory otitis media; application effect

Secretory otitis media is very common in clinical practice. The main pathological symptoms are middle ear effusion and hearing loss. It is a non-suppurative inflammatory disease. This disease can occur at any age. If not treated in time, it may develop into diseases such as adhesive otitis media and middle ear cholesterol granuloma, causing irreversible hearing damage. Currently, tympanocentesis is the preferred option for the treatment of secretory otitis media. It can use a puncture needle to extract the ear fluid, thereby eliminating the condition. It is easy to operate, less invasive, and has precise effects. However, surgery is irritating and traumatic after all, and postoperative recovery is very important. Improper care will not only affect the recovery of the disease, but may even cause complications such as infection and unhealed tympanic membrane perforation. Therefore, high-quality nursing intervention is crucial. However, the content of routine nursing care is basic and insufficiently targeted, making it difficult to achieve optimal nursing effects. Targeted nursing intervention emphasizes the implementation of interventions based on the patient's individual situation, and the nursing measures are more targeted, which can greatly improve the quality of nursing care [1, 2]. In order to explore the effect of targeted nursing intervention in the care of secretory otitis media treated by tympanocentesis, this study took 66 patients of the same type in our hospital from February 2025 to February 2026 as the observation objects, and carried out the following research.

1. Materials and Methods

1.1 General Information

The observation period was selected from February 2025 to February 2026, and 66 patients with secretory otitis media who underwent tympanocentesis in our hospital during this period were selected as the observation subjects. Inclusion criteria: (1) Diagnosed by a combination of otoscopy, pure tone testing, etc., meeting the diagnostic criteria for secretory otitis media; (2) Meeting the indications for tympanostomy, and the surgery is the first time; (3) The patient agrees to participate in the study, and is approved by the hospital ethics committee. Exclusion criteria: (1) Combined with other ear diseases; (2) Have a history of ear surgery; (3) Have coagulation disorders; (4) Have major organ dysfunction; (5) Have cognitive or mental disorders. According to the principle of different nursing plans, they were divided into 2 groups (reference group and study group), both with 33 cases. In the reference group, the distribution of male: female cases was 18:15, the mean age was (46.40±3.21) (20~66) years, and the mean disease duration was (3.85±1.42) (1~7) months; in the study group, the distribution of male: female cases was 17:16, the mean age was (46.47±3.25) (21~67) years, and the mean disease duration was (3.91±1.38) (1~8) months. There was no statistically significant difference in gender, age, and disease course data between groups (P>0.05).

1.2 Methods

The reference group received routine care: pre-operative education on diseases, surgical knowledge and precautions, and assistance to patients in completing pre-operative examinations; intra-operative environmental and postural care and vital sign monitoring; post-operative condition monitoring and medication guidance, and informing patients of matters they need to pay attention to. The research team carried out targeted care based on the reference group. (1) Targeted psychological care. Understand the patient's education level and understanding ability, and use easy-to-understand language to explain the purpose, process, and possible discomforts of the surgery based on personal circumstances. Patiently answer the patient's questions, improve the patient's understanding of the surgery, and at the same time eliminate their worries, reduce tension, fear, and other negative emotions, so that they can cooperate with the surgery in a better state. (2) Targeted guidance. Before the operation, the patient is instructed to properly clean the external auditory canal, ensure the ear is clean, and keep the patient warm to avoid catching a cold. The patient is instructed to breathe through the mouth and informed of the key points of cooperation during the operation. If the patient's blood pressure is high due to emotional stress, the patient is guided to take a deep breath and relax slowly, and the operation is performed after confirming that the blood pressure is stable. (3) Targeted care during surgery. Actively communicate with patients to understand their emotions, and based on personal circumstances, distract attention and relieve tension by playing music, chatting, etc. If the patient is in obvious pain, guide him or her to breathe slowly and deeply, and inform the doctor to adjust the intensity of the operation. (4) Targeted postoperative care. Immediately after the operation, use a sterile cotton ball to gently block the opening of the external auditory canal to prevent the entry of external dirt. Remove the cotton ball when there is no bleeding. Inform the patient that the outer ear must be absolutely dry. Use waterproof earplugs or cotton balls coated with petroleum jelly when washing your face, hair, and bathing. Avoid swimming and diving. Avoid blowing your nose forcefully or opening your mouth when sneezing within 1 week. If the patient is complicated by rhinitis, sinusitis, etc., instruct the patient to use nasal glucocorticoid spray to promote the improvement of Eustachian tube function and avoid recurrence. (5) Targeted life guidance. According to the patient's eating habits and preferences, guide them to eat scientifically, choose light and easy-to-digest foods, increase vitamin intake, avoid spicy or hard foods, drink more water to prevent constipation, and avoid strenuous activities or heavy lifting in the short term.

1.3 Observation Indicators

(1) Postoperative recovery: record the average time for the patient's postoperative hearing recovery, tinnitus disappearance, and middle ear effusion disappearance.
(2) Complications: After surgery, the patients were counted for complications, including infection, unhealed tympanic membrane perforation, and dizziness.

1.4 Statistical Analysis

The data processing tool of this study uses SPSS27.0 software. Count data are presented in the form of n (%), and inter-group data are subject to the χ^2 test; grade data are presented in the form of n (%); measurement data that meet

the normal distribution standard are presented in the form of ($\bar{x} \pm s$). The test method between groups and within groups is the independent-samples t-test. Data analysis: P<0.05, indicating that the data difference is statistically significant.

2. Results

2.1 Comparison of Postoperative Recovery Conditions Between the Two Groups of Patients

Comparing postoperative recovery between groups, the study group was faster (P<0.05), as shown in Table 1.

Table 1. Comparison of postoperative recovery conditions between the two groups of patients ($\bar{x} \pm s$, d)

Group	Number of examples (n)	Hearing recovery	Tinnitus disappears	Ear effusion disappears
Research group	33	4.23±1.15	3.56±1.08	7.42±1.86
Reference group	33	6.78±1.83	5.89±1.52	9.35±2.41
t		6.778	7.178	3.642
P		<0.001	<0.001	<0.001

2.2 Comparison of Postoperative Complications Between the Two Groups of Patients

Comparing complications between groups, the incidence rate of the study group was lower (P<0.05), as shown in Table 2.

Table 2. Comparison of postoperative complications between the two groups of patients (n/%)

Group	Number of examples (n)	Infect	Tympanic membrane perforation does not heal	Dizziness	Incidence
Research group	33	1	0	0	1 (3.03)
Reference group	33	2	2	3	7 (21.21)
χ^2					5.121
P					<0.05

3. Discussions

Secretory otitis media is also clinically known as effusion otitis media or catarrhal otitis media. After the onset, the main clinical symptoms are middle ear effusion, hearing loss, etc. The cause is closely related to Eustachian tube dysfunction. When the patient's Eustachian tube is blocked or dysfunctional, the air inside the middle ear cavity is absorbed to form negative pressure, which will cause the submucosal blood vessels to leak and form effusion. Tympanocentesis is currently the first-line method for the treatment of secretory otitis media. The principle is to extract the middle ear effusion to relieve negative pressure and quickly help patients improve clinical symptoms. It is not only easy to operate, but also has less trauma, good efficacy, and low cost. However, the effect of myringotomy does not only depend on the surgical operation itself, but is also closely related to the quality of clinical care. High-quality care can not only promote the patient's postoperative recovery, but also reduce the occurrence of various complications, and is a crucial link in surgical treatment [3].

The results of this study suggest that compared with the reference group, the time taken for postoperative hearing recovery, tinnitus disappearance, and middle ear effusion disappearance in the study group was significantly shorter, P<0.05. This shows that targeted nursing intervention has played an extremely significant role in the postoperative rehabilitation of patients with secretory otitis media treated by tympanostomy [4]. Reasons for analysis: Targeted nursing is a patient-centered care method that emphasizes fully analyzing the patient's individual needs before taking targeted intervention measures. Whether it is health education, psychological care, or daily care, the content is more detailed and more in line with the patient's individual needs. Not only can medical staff avoid adverse risks for patients, but it can also improve the patient's own health knowledge level, increase their self-care ability, and avoid some adverse behaviors that are not conducive to disease recovery. Therefore, it speeds up the patient's postoperative recovery [5]. This study also suggested that after surgery, the incidence of complications in the study group was

significantly lower than that in the reference group, P<0.05. This shows that the application of targeted nursing intervention can effectively reduce the risk of postoperative complications in patients with secretory otitis media treated by tympanostomy [6, 7]. Analyzing the reasons, targeted nursing care pays great attention to the patient's individual situation and nursing needs during the entire perioperative period, and the content is refined to various aspects such as psychological care, health education, ear canal care, and life guidance. It can not only keep the patient in a good mood and improve the cooperation with the surgery, but also after the operation, It can also ensure that the patient's external auditory canal is dry and clean, greatly reducing the risk of infection; instructing the patient to avoid blowing the nose too hard and engaging in high-pressure environmental activities prematurely can reduce the tension at the puncture hole, create good conditions for the healing of the tympanic membrane, and reduce the risk of non-healing of the perforation [8].

In summary, targeted nursing intervention applied in the treatment and care of patients with secretory otitis media after tympanostomy can accelerate their postoperative recovery and reduce postoperative complications, and is worthy of promotion.

Ethics Approval

This study was approved by the Ethics Committee of The First Affiliated Hospital of Yangtze University. All patients provided written informed consent prior to enrollment.

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