

The clinical effect of perioperative high-quality nursing intervention on children with cleft lip and palate.

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Abstract

Objective: To analyze the clinical effect of perioperative high-quality nursing intervention on children with cleft lip and palate.

Methods: From January 2016 to January 2017, sixty-two children with cleft lips and palate who received surgical treatment in Children's Hospital of Nanjing Medical University were selected as the objects. These patients were divided into two groups, termed as routine treatment group and top-quality group. The patients in the routine treatment group received routine nursing whereas the top-quality group received perioperative high-quality nursing intervention. The post-nursing effects of the two groups were analyzed and compared.

Results: The average post-nursing hospitalization days and hospitalization cost of the top-quality group were less than those of the routine treatment group, and the difference was statistically significant ($P<0.05$); The incidence of complications of the top-quality group was 6.45%, lower than 19.35% of the routine treatment group ($P<0.05$). The family satisfaction degree of the top-quality group was 90.32%, higher than 70.97% of the routine treatment group ($P<0.05$).

Conclusion: Perioperative high-quality nursing intervention for children with cleft lip and palate may effectively promote patients' rehabilitation, improve the doctor-patient relations and thus can be further popularized and applied.

Keywords: Children with cleft lip and palate, Peri-operative period, High quality nursing intervention.

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Introduction

Cleft lip and palate, a commonplace disease of Pediatric Dentistry Department, is congenital malformation. Due to cleft palate, it may easily cause the deformation of soft tissue or even deformities and defects of bone tissue and finally affect patients' functions of normal utterance, eating and sucking [1,2]. Cleft lip and palate will not only affect the beauty of the children's face but also bring heavy psychological and economic burden to the children and their families, and it may even affect the growth of children because of eating difficulty. Clinically speaking, the treatment for children with cleft lip and palate is mostly surgery; however, the irritability of surgery and children's poor self-prosecution may easily affect the effect of surgical treatment [3,4]. This paper mainly studies and compares the effect of the routine treatment group and that of the high-quality nursing intervention summarized as following.

Materials and Methods

Sixty-two children with cleft lips and palate who received surgical treatment in Children's Hospital of Nanjing Medical University between January 2016 and January 2017 were

randomly selected as the objects, and they were divided into different groups according to different nursing methods. Thirty-one patients who received routine nursing were of the routine treatment group, where there were 16 male patients and 15 female patients with their age between 0.4 and 5 and their average age of (2.4 ± 0.32). Another thirty-one patients who received peri-operative high-quality nursing intervention were of the top-quality group, where there were 17 male patients and 14 female patients with their age between 0.4 and 4 and their average age of 2 ± 0.11 . There was no statistical significance in comparison of male/female ratio and age gap ($P>0.05$).

Ethical approval

Our study was approved by the ethical committee of Children's Hospital of Nanjing Medical University (Ref1089556). The consents of participation in our study have been gotten from all patients.

Standards of inclusion and exclusion

Both groups of children underwent cleft lip and palate repair surgery after being admitted into hospital. The study on them was approved and the informed consent form was signed by

the families of the children. The study excluded children with functional disorders such as liver and kidney, children with severe chronic disease, and children with incomplete records, and children who cannot cooperate with caregivers.

Nursing methods

Routine nursing was given to the routine treatment group, including illness monitoring, respiratory nursing, oral nursing and pain nursing; at the same time, peri-operative high-quality nursing intervention was given to the top-quality group. The specific measures were as follows:

Pre-operative high-quality nursing

(1) **Pre-operative illness condition assessment:** Before operation, caregivers should give a detailed assessment to patients' illness conditions, including pathological syndrome, other associated deformities and so on, and record the related information so that the attending physician may conduct better treatment. Meanwhile, the nursing staff should also communicate with the family members of the children to understand the family history and medications.

(2) **Pre-operative psychological nursing:** 2-5 years old children are extremely vulnerable to the sense of inferiority and desperation and even self-imposed isolation because of their own physical defects. Thus, the caregivers should communicate with children with mild language, close the distance between them and the children to alleviate children's adverse psychological conditions; at the same time, the caregivers should also do psychological crisis intervention for the patients' families, tell them about surgical methods and caveats, and show them relevant surgical facilities to assuage their worries and fears. In addition, children with cleft lip and palate have stronger dependence on their families, so the caregivers should inform the patients' families not to exude such negative emotions as uneasiness or anxieties but to enhance patients' confidence in treatment with encouragement and alleviate their mental pressure.

(3) **Pre-operative nutritional support:** Children with cleft lips and palate suffer from malnutrition, which may easily affect patients' tolerance of surgery; so caregivers should enjoin the patients' families to guarantee high-vitamin and high-protein diet for the patients, and children still in lactation should stop breast milk or artificial feeding and choose to eat semi-liquid or liquid diet before surgery.

(4) **Pre-operative warm-keeping:** Before operation, the paramedic and the patients' families should keep the patients warm and minimize the flow of personnel in the ward so as to avoid infection induced by personnel mix and operation delay.

Intra-operative high-quality nursing

The paramedic should enter the operating room in advance and prepare the required surgical items. At the same time, he or she should adjust the indoor temperature and humidity, and should softly communicate with children and reassure children with

language to ensure that the operation will be conducted smoothly. In addition, during operation, the paramedic should also assist the physician by closely monitoring the patients' vital signs. Once the paramedic finds abnormal phenomenon, he or she need inform the doctor in time.

Post-operative high-quality nursing

(1) **Intensive monitoring of postoperative vital signs of the pediatric patient:** After the pediatric patient is sent to the intensive care unit, the paramedic should monitor his or her illness condition closely and avoid his or her vomiting or coughing, and send the pediatric patient to ordinary ward after he or she regains consciousness, and remove the catheter after he or she regains vital signs. Before removing the catheter, the paramedic should remove the secretions or blood stains in the tubes of the pediatric patient's airway and trachea, and the acts should be gentle and quick to avoid irritating the patient's eyes or respiratory mucosa.

(2) **Incision nursing:** After the operation, the paramedic should closely monitor the incision of the pediatric patient and wash the wound twice to thrice with saline every day. At the same time, the paramedic should also look after the pediatric patient lest he or she should scratch the incision to cause rupture and infection of incision.

(3) **Respiratory tract nursing:** After the operation, the paramedic should keep the pediatric patient's mouth clean and clean his or her mouth regularly with mouthwash water. In addition, the paramedic should ensure that the patient is in a horizontal position with his head tilted to one side to ensure the smoothness of the patient's respiratory tract.

(4) **Rehabilitation nursing:** Once the pediatric patient has a slight recovery, the paramedic should guide the patient's labial muscle training and language training and correct pronunciation by his or her families to promote his or her recovery.

Effect assessment

The average hospitalization days, average hospitalization costs and the incidence of complications are recorded. At the same time, the post-nursing satisfaction degree of the patients' families is evaluated, including the paramedic's business proficiency, prognostic guidance, and job responsibilities and so on. The full score is 100, with 86 and above very satisfactory, with 65-85 satisfactory, and less than 65 unsatisfactory. Total satisfaction=(very satisfactory + satisfactory)/group number × 100%.

Statistical analysis

All the data of this study were summarized and analyzed with SPSS19.0 statistical software. The test level was $\alpha=0.05$, and the difference was statistically significant ($P<0.05$). The count data were expressed as "n, %" and checked by Chi-square test. The measurement data were described as Mean \pm SD and assessed by t-test.

Results

Comparison of the post-nursing average hospitalization days and average hospitalization costs in two groups

The post-nursing average hospitalization days and average hospitalization costs of the top-quality group were 7.01 ± 1.23 days and 0.87 ± 0.11 thousand yuan respectively, and those of the routine treatment group were 10.24 ± 1.15 days and 1.18 ± 0.13 thousand yuan respectively. The differences of the

average hospitalization days and average hospitalization costs between two groups were statistically significant ($P < 0.05$).

Comparison between the post-nursing incidence of implications in two groups

The post-nursing incidence of implications of the top-quality group was 6.45%, lower than 19.35% of the routine treatment group. The difference between the two groups was remarkable of statistical significance ($P < 0.05$). See Table 1 as follows:

Table 1. Comparison between the post-nursing incidence of implications in two groups.

Groups	Number	Malnutrition	Bleeding	Tympanitis	Respiratory Obstruction	Incidence (%)
Top Quality Group	31	0	2	0	0	6.45
Routine Group	31	1	3	0	2	19.35

Comparison between the post-nursing satisfaction degree of pediatric patients' families in the two groups

The family satisfaction degree of the top-quality group was 90.32%, higher than 70.97% of the routine treatment group

($P < 0.05$). The difference between the two groups was remarkable of statistical significance ($P < 0.05$). See Table 2 as follows:

Table 2. Comparison between the post-nursing satisfaction degree of pediatric patients' families in two groups.

Groups	Number	Very satisfactory	Satisfactory	Unsatisfactory	Total Satisfaction Degree (%)
Top Quality Group	31	16 (51.61)	12 (38.71)	3 (9.68)	90.32
Routine Group	31	12 (38.71)	10 (32.26)	9 (29.03)	70.97

Discussion

Cleft lip and palate is a common disease in oral and maxillofacial regions. The symptoms of the disease mainly include dysthelasia, abnormality of the anatomy morphology, changes of the oral environment and so on. Surgery is the first choice for clinical treatment of the disease, but the risk is high and the pediatric patient has a poor ability of auto-anamnesis. Thus, the peri-operative clinical nursing is particularly important [5-10]. The high-quality nursing intervention is an emerging mode of clinical nursing service with the pediatric patient the center, and it carries out a comprehensive and optimized preoperative and intraoperative and postoperative nursing service [11,12]. Perioperative high quality nursing intervention for children with cleft lip and palate can effectively give the children scientific and effective dietary guidance and thus improve children's bodily malnutrition. In this study, the post-nursing average hospitalization days and average hospitalization costs of the top-quality group were less than those of the routine treatment group, and the difference was statistically significant ($P < 0.05$); this result consistent with that of Liu Shaoyong's study [13-15]. This indicated that high quality nursing service can improve peri-operative living quality of children with cleft lip and palate and advance their

recovery. This study also suggested that the incidence of complications of the top-quality group was 6.45%, lower than 19.35% of the routine treatment group ($P < 0.05$), and that the family satisfaction degree of the top-quality group was 90.32%, higher than 70.97% of the routine treatment group ($P < 0.05$). This showed that high quality nursing service can effectively reduce the incidence of complications of peri-operative children with cleft lip and palate, improve the satisfaction degree of the patients' families and thus improve the relations between the paramedic and patients.

In conclusion, the peri-operative high quality nursing intervention for children with cleft lip and palate is remarkably effective, and thus has high clinical application values.

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