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To Explore the Application Effect of Bird's Nest Nursing in Neonatal Nursing

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Abstract: *Objective:* To observe and study the practical value of adopting nest nursing in neonatal nursing. *Methods:* From January 2023 to January 2024, a total of 382 newborns that were admitted to the hospital were selected to carry out this study. They were divided into two groups, the routine group and the observation group, with 191 cases in each group. Newborns in the routine group were given basic nursing intervention, while those in the observation group were given bird's nest nursing intervention. The growth and development indexes, the occurrence of adverse reactions, the improvement of gastrointestinal function, and the nursing satisfaction rate of their families were analyzed and studied. *Results:* The growth and development indexes of newborns in the observation group were significantly better than those in the routine group ($P < 0.05$). The incidence of adverse neonatal reactions in the observation group was significantly lower than that in the routine group ($P < 0.05$). The improvement of gastrointestinal function of newborns in the observation group was significantly better than that in the routine group ($P < 0.05$). The nursing satisfaction rate of newborns' families in the observation group was significantly higher than that in the routine group ($P < 0.05$). *Conclusion:* As for the key points of clinical newborn care, the actual effect of adopting the bird's nest nursing intervention is more prominent, and its main function is to promote the growth and development of newborns. It can not only avoid the risk of adverse reactions in many aspects but also improve the gastrointestinal function of newborns, so that the nursing satisfaction rate of family members is obviously improved. It is recommended to be applied and popularized in clinical practice.

Keywords: Neonatal care; Bird's nest nursing; Application effect

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1. Introduction

For most newborns, because they are separated from their mothers, their immune function is reduced and their resistance is poor, which makes them more likely to suffer from infectious diseases. Based on this, it is necessary to carry out targeted nursing intervention for newborns in clinic. Bird's nest nursing is a comprehensive and meticulous nursing intervention method, which is mainly based on the use of warm boxes and soft cloth rolls, so that it has a sense of boundary and security, simulates the living environment in the womb for newborns,

significantly improves their fear and anxiety, and can also meet various nursing needs to some extent, and promote the healthy growth and development of newborns [1]. In this study, basic nursing intervention was given to the newborns in the routine group, and the newborns in the observation group were given bird's nest nursing intervention [2]. The growth and development indexes, the occurrence of adverse reactions, the improvement of gastrointestinal function as well as the nursing satisfaction rate of family members of the two groups were analyzed and studied.

2. Data and methods

2.1. General information

From January 2023 to January 2024, a total of 382 newborns admitted to the hospital were selected to carry out this study. They were divided into two groups, the routine group and the observation group, with 191 cases in each group. In the routine group, there were 100 males and 91 females, aged from 1 to 10 days, with an average age of (4.36 ± 0.39) d and a weight of (3,216.48 ± 146.42) g. In the observation group, there were 101 males and 90 females, aged from 1 to 9 days, with an average age of (4.71 ± 0.55) d and a weight of (3,216.04 ± 146.89) g. There was no significant difference in the baseline data of newborns between the two groups, which was comparable ($P > 0.05$).

Inclusion criteria: (1) Full-term delivery of newborns; (2) Apgar score of newborn is over 9; (3) The clinical data of newborns are complete, and (4) The family members have a high degree of cooperation with this study.

Exclusion criteria: (1) Neonates with congenital diseases; (2) Combined with immune system disorder; (3) Combined with coagulation dysfunction; (4) The family members of the children had poor nursing compliance and withdrew from this study halfway.

2.2. Methods

In the routine group, the newborns were given basic nursing intervention. The nurses needed to put the newborns in the incubator, monitor their vital signs, insist on daily cleaning, and create a comfortable and clean environment. In the observation group, the newborns were given bird's nest nursing intervention:

(1) Health guidance

Nurses should pay attention to health guidance in the process of neonatal care and need to inform the family members of newborns in detail about the key of bird's nest nursing, so as to alleviate their anxiety [3]. Through patient explanation, family members can understand the positive influence of bird's nest nursing on the healthy development of newborns, thus enhancing their trust in nursing work. At the same time, nurses should actively communicate with the newborn's family members, help them adapt to the role change as soon as possible, change from bystander to participant, guide the family members to touch and care for the newborn, and enhance the parent-child relationship. On this basis, nurses can also encourage family members to ask questions, answer their doubts in time, and jointly create good conditions for the healthy growth of newborns.

(2) Build a nest environment

In constructing a bird's nest environment, the principles of environmental engineering can be effectively applied. To ensure safety and hygiene, nurses should use thoroughly disinfected cotton sleeping bags as nesting material. After putting the cotton sleeping bag into the incubator, according to the actual needs of the newborn, the environmental factors such as temperature and light in the incubator are adjusted by using the

principle of environmental engineering to simulate the intrauterine environment. When adjusting the light, special attention should be paid to avoid the injury to the newborn's eyes caused by strong light [4]. Next, the nursing staff should construct a nest-like environment to help the newborn stay in the lateral position and slightly bend its limbs to make the posture of the newborn more comfortable. At the same time, roll up the edge of the sleeping bag and cling to the back of the newborn to simulate the feeling of wrapping in the uterus and give the newborn enough security and comfort.

(3) Daily care

Adjust the suitable water temperature for newborns, and pay attention to the eyes and ears of newborns when cleaning them. Immediately after completion, clean the newborn's body and apply physiological saline to wipe the eyes before wiping touch oil or talcum powder on the skin folds. In addition, after the defecation of the newborn, the diaper should be changed immediately, and the perineal position should be cleaned to avoid red buttocks in the newborn.

(4) Adjust the sleeping position

In adjusting sleeping posture, nurses should use physiological principles to provide the best sleeping posture for newborns. That is, placing a soft pillow 2cm behind the neck of the newborn can help it open the airway and keep breathing unobstructed. At the same time, help newborns adjust their sleeping posture regularly to avoid the oppression on bones and muscles caused by keeping the same posture for a long time. Before touching newborns, nurses need to disinfect their hands to prevent cross infection.

2.3. Observation indicators

(1) Analyze and study the growth and development indicators of the two groups of newborns: The specific indicators include sleep time, weight gain, and temperature fluctuation.

(2) Analyze and study the adverse reactions of newborns in the two groups: The specific indicators include crying, fever and infection.

(3) Analyze and study the improvement of gastrointestinal function of newborns in the two groups: The specific selection indicators include the time of first defecation, the time of yellow defecation, and the increase of milk intake volume.

(4) Analyze and study the nursing satisfaction rate of family members of two groups of newborns: Based on the self-made questionnaire of family members' nursing satisfaction in our hospital, the actual items include nursing technology, nursing attitude, nurse-patient communication, and so on. The score is 0–100, with over 85 being completely satisfied, 60–84 being basically satisfied, and below 60 being dissatisfied.

2.4. Statistical analysis

SPSS 25.0 software was used for data processing, and the measurement data were represented by "($\bar{x} \pm s$)", with t test; The counting data is represented by "n/%" and tested by χ^2. When $P < 0.05$, it is statistically significant.

3. Results

3.1. Analyze and study the growth and development indicators of the two groups of newborns

The specific data are shown in **Table 1**. The growth and development indexes of newborns in the observation group are obviously better than those in the routine group ($P < 0.05$).

Table 1. Comparison of growth and development indexes of newborns between routine group and observation group ($\overline{x} \pm s$)

Group	Number of cases	Sleep time (h/d)	Weight gain (g)	Fluctuation range of body temperature (℃)
Observation group Conventional group	191	21.45 ± 1.44	16.52 ± 0.36	0.51 ± 0.15
Observation group Conventional group	191	14.79 ± 1.38	11.56 ± 0.28	0.96 ± 0.23
t	——	21.381	69.637	10.493
P	——	0.000	0.000	0.000

3.2. Analyze and study the adverse reactions of newborns in two groups

The specific data are shown in **Table 2**. The incidence of adverse reactions of newborns in the observation group was significantly lower, which was significantly better than that in the routine group ($P < 0.05$).

Table 2. Comparison of neonatal adverse reactions between routine group and observation group

Group	Number of cases	Crying	Generate heat	Infect	Incidence rate of adverse reactions (n,%)
Observation group Conventional group	191	5(2.62)	4(2.10)	0(0.00)	9(4.72)
Observation group Conventional group	191	10(5.24)	10(5.24)	5(2.61)	25(13.09)
X^2	——	——	——	——	8.265
P	——	——	——	——	0.004

3.3. Analyze and study the improvement of gastrointestinal function in two groups of newborns

The specific data are shown in **Table 3**. The improvement of gastrointestinal function of newborns in the observation group is better than that in the routine group ($P < 0.05$).

Table 3. Comparison of the improvement of gastrointestinal function between the routine group and the observation group ($\overline{x} \pm s$)

Group	Number of cases	Time of first defecation (h)	Time when meconium turns yellow (h)	The volume of increased milk consumption of newborns (mL)
Observation group Conventional group	191	18.56 ± 1.39	46.55 ± 2.68	6.28 ± 0.63
Observation group Conventional group	191	25.64 ± 1.25	64.27 ± 2.81	3.42 ± 0.25
t		24.251	29.220	27.019
P		0.000	0.000	0.000

3.4. Analyze and study the satisfaction rate of family nursing of newborns in two groups

The specific data are shown in **Table 4**. The nursing satisfaction rate of newborns' families in the observation

group is significantly higher than that in the routine group ($P < 0.05$).

Table 4. Comparison of nursing satisfaction rate of family members of newborns between the two groups

Group	Number of cases	Very satisfied (n,%)	Basic satisfaction (n,%)	Dissatisfied (n,%)	Patient satisfaction (n,%)
Observation group Conventional group	191	119(62.30)	69(36.13)	3(1.57)	188(98.43)
Observation group Conventional group	191	100(52.36)	70(36.65)	21(10.99)	170(89.02)
X^2		——	——	——	14.405
P		——	——	——	0.000

4. Discussion

The name of nest nursing mainly comes from the nest built by birds for hatching eggs. Nest nursing is also a kind of neonatal nursing mode [5]. The core of this nursing mode is to make newborns feel the environment similar to that in the mother's body and ensure that they can develop healthily and gradually adapt to the external environment. The results of this study showed that the growth and development indexes of newborns in the observation group were significantly better than those in the routine group ($P < 0.05$). The incidence of adverse neonatal reactions in the observation group was significantly lower than that in the routine group ($P < 0.05$). The improvement of gastrointestinal function of newborns in the observation group was significantly better than that in the routine group ($P < 0.05$). The nursing satisfaction rate of newborns' families in the observation group was significantly higher than that in the routine group ($P < 0.05$). It is not difficult to understand that the nest nursing creates a good healthy growth environment for newborns by creating a uterus-like environment for them.

In the bird's nest nursing intervention, parents are encouraged to form good emotional communication and contact with newborns, and parents can try to have skin contact with newborns, which can effectively enhance their sense of security. In the field of neonatal care, bird's nest nursing, a widely concerned nursing model, has been recognized by more and more medical institutions and families [6]. This nursing method not only attaches importance to the warmth and comfort of newborns but also emphasizes the active participation of family members. Bird's nest nursing can create an external nursing environment similar to the uterus for newborns, which has many advantages for newborns.

(1) It can promote the emotional connection between parents and newborns. In this nursing, parents will have frequent skin contact with newborns. This kind of intimate contact not only helps to establish emotional bonds between parents and babies, but also makes babies feel the care from their parents, thus enhancing the sense of security of newborns, which is of great significance to the future psychological development of newborns.

(2) It provides a warm and comfortable environment for newborns [7, 8]. By using the special bird's nest cotton pad, nurses can create a small environment for newborns to maintain a suitable temperature. In this environment, newborns can maintain normal body temperature and avoid overheating or overheating. This is very important for the physical health of newborns because the stability of body temperature is the basis for the normal growth and development of newborns.

(3) Imitate the fetus in the maternal environment [9]. This nursing method can make the newborn seem to be

still in the mother's body by providing feelings similar to the intrauterine environment, such as intimate skin contact, warm and slightly compact space, etc. This feeling of familiarity and safety is helpful to alleviate the discomfort caused by leaving the mother's body and promote the healthy development of the newborn [10].

(4) It can promote the healthy development of newborns. By providing a warm and comfortable environment for newborns, this nursing mode helps to establish a healthy immune system. In such an environment, the newborn's body can better resist the invasion of external pathogens and then maintain a healthy state.

(5) Bird's nest nursing emphasizes the active participation of family members. In this nursing process, parents can participate in the daily care of newborns, such as feeding, changing diapers, bathing, and other activities. This participation can not only strengthen the parent-child relationship between parents and newborns but also give parents more sense of accomplishment in the process of caring for newborns.

5. Conclusion

To sum up, for the key points of clinical neonatal care, the actual effect of adopting the bird's nest nursing intervention is more prominent, and its main function is to promote the growth and development of newborns. It can not only avoid the risk of adverse reactions in many aspects, but also improve the gastrointestinal function of newborns, so that the nursing satisfaction rate of family members is obviously improved. It is recommended to be applied and popularized in clinical practice.

Disclosure statement

The author declares no conflict of interest.

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