

The Use of Reiki in Transient Tachypnea of the Newborn

Yenidoğanın Geçici Takipnesinde Reiki Kullanımı

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ABSTRACT This study was conducted to evaluate the effect of Reiki therapy on maintaining the integrity based on Levine's Conservation Model in a case treated for respiratory distress in a neonatal intensive care unit at a university hospital, and transient tachypnea of newborn. A term male baby with a birth weight of 3,000 g, who was born by cesarean section, had bradycardia after birth. The baby was ventilated with pulmonary balloon valvuloplasty and kept under observation for 2 hours. He was taken to the neonatal intensive care unit when his respiratory effort continued. Interventions, which we designed considering the protection principles in a term newborn case followed up with the diagnosis of transient tachypnea of newborn, provided us with a holistic perspective and positively stimulated the baby's internal and external adaptation. The baby and the family adapted to this process more rapidly and maintained the integrity.

Keywords: Child nursing; neonatal care; therapeutic touch (Reiki)

ÖZET Bu çalışma, bir üniversite hastanesinin yenidoğan yoğun bakım ünitesinde, solunum sıkıntısı nedeniyle tedavi edilen bir olguda, Reiki tedavisinin Levine's Conservation Modeli'ne göre bütünlüğün korunmasına etkisini ve yenidoğanın geçici takipnesini değerlendirmek amacıyla yapılmıştır. Sezaryen ile dünyaya gelen 3.000 g term erkek bebekte, doğum sonrası bradikardi gelişti. Bebek, pulmoner balon valvuloplasti ile ventile edildi ve 2 saat müşahade altında tutuldu. Solunum çabası devam ederken yenidoğan yoğun bakım ünitesine alındı. Yenidoğanın geçici takipne tanısı ile takip edilen term yenidoğan olgusunda, koruma ilkelerini göz önünde bulundurarak tasarladığımız müdahaleler, bize bütüncül bir bakış açısı sunmuş, bebeğin iç ve dış uyumunu olumlu yönde uyarmıştır. Bebek ve aile bu sürece daha hızlı adapte olmuş ve bütünlüğünü korumuştur.

Anahtar Kelimeler: Çocuk hemşireliği; yenidoğan bakımı; tedavi amaçlı dokunma (Reiki)

There is a great need to develop theoretical frameworks of nursing in order to evaluate the infants under treatment in a neonatal intensive care environment from a holistic point of view, to create an effective care plan and to systematize the interventions by giving a concrete form to the nursing interventions.^{1,2} Myra Levine's Conservation Model provides practical approaches for the baby care by providing an ideal conceptual framework for the baby to leave a safe fetal environment and adapt into a new and diverse habitat, in the neonatal intensive care unit environment.³ Myra Levine advocates individual-centered care in her

model, believing that a "personalized nursing care" should be implemented. In Levine's Conservation Model, 3 concepts, namely the "adaptation, integrity, and conservation" come to the fore.² According to Levine, who argues that the nursing profession consists of human interaction, nursing care should be discussed in 4 dimensions, which should be formed according to individual characteristics.⁴ The concept of conservation, on which the model is built, consists of the dimensions of conservation of energy, conservation of structural integrity, conservation of individual integrity, and conservation of social integrity.^{1,4}

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REIKI

The life energy is a non-physical energy field that gives life to all living things, and it is in a constant state of flow in and around a living being. Physical and environmental barriers to life energy flow make the individual more prone to diseases. The person who applies Reiki energy, that is the life force energy, directs Reiki energy to a living recipient, such as humans, animals, and plants. Reiki energy is a spiritual practice.⁵⁻⁸ Reiki is a practical method that can be applied to patients of every age group. It has also been reported in many studies that it has a sedative effect on complications of diseases.^{5,9,10}

CASE REPORT

Written and verbal consent was obtained from the family. The baby was on the 38th week of gestation, and the birth weight was 3,000 g. The Apgar score was 3 at the first minute, and 5 at the 5th minute.

Height was 49 cm, and head circumference was 34 cm. The mother’s age was 27, and she was a housewife. The father’s age was 33, and he was a worker. Apart from the baby, the couple also has a 5-year-old girl. The mother gave birth by cesarean section. The mother had a moderate level of income, and had no miscarriage or stillbirth. The mother had a problem-free pregnancy and her fever rose to 38 °C only once during the pregnancy and she used paracetamol. The mother stated that it was a planned pregnancy. The mother had a planned cesarean section. She stated that she was concerned since her baby has been in the intensive care environment. The clinical diagnosis of the baby was respiratory distress, and transient tachypnea of the newborn.

CLINICAL FINDINGS

The Apgar score of the baby at the 1st minute was 3, and the baby had bradycardia. After ventilation by positive pressure ventilation for 10 seconds and 2-

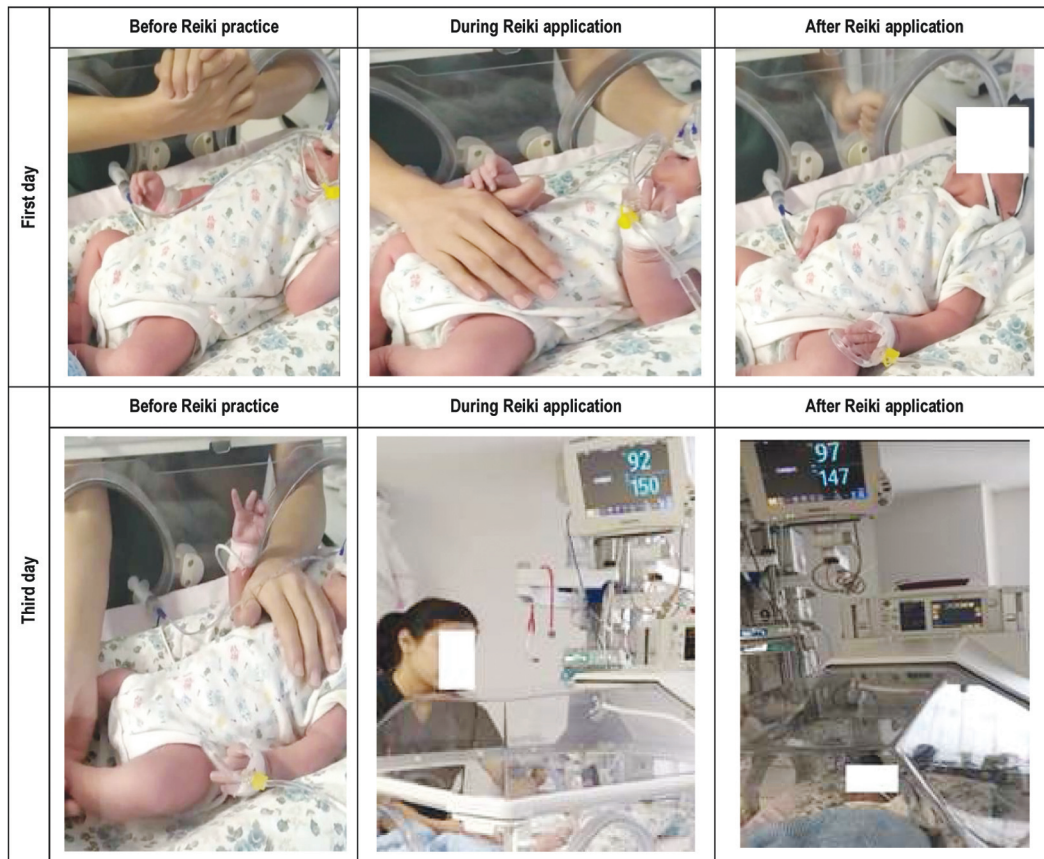


FIGURE 1: Images of Reiki application 1st and 3rd day.

TABLE 1: Nursing diagnoses and therapeutic interventions based on the conservation model.

Conservation model steps	Descriptive characteristics	Nursing diagnoses	Purpose and interventions	Follow-up and outcome
Conservation of energy	-The unfamiliar environment of the neonatal intensive care unit for the baby, and exposure to intense experiences, such as sound, heat, pain and stress -Insertion of bubble CPAP cannula into the nose for the oxygen application, vascular access opening for the IV fluid, pain experienced by the infant -Intercostal retractions were present, respiratory rate was 76 per minute, respiratory type was irregular and there were retractions, pulse was 172 bpm, fever was 37.1 °C, and the baby was in a state of constant agitation and crying -Since the baby was unable to hold her mother's breast for breastfeeding, the baby was fed with OG, and the baby vomited the food in cases of active agitation -Slight distension in the abdomen, and presence of gas in PA image	<p>1. Slowed down energy flow secondary to the impact of pain, anxiety, and environmental stress factors.¹¹</p> <p>2. Discomfort in sleep pattern due to changes in maintaining physiological and behavioral adaptation systems.¹¹</p>	<p>Purpose: In the energy conservation dimension, it is believed that all kinds of stimuli originating from the inner and outer environment are acting on the baby at the same time, and it is aimed to minimize energy use and to reduce the physiological and psychological effects of the stress factors</p> <p>Intervention: Reiki application was performed to the baby for active agitation and follow-up of unstable physiological parameters.</p> <p>Purpose and intervention: Reiki application was performed to the patient in order to regulate the deterioration in sleep patterns due to the change in maintaining physiological and behavioral adaptation systems. For this purpose, the general condition and physiological parameters of the baby were followed up during Reiki application.</p>	During the procedure, it was observed that Reiki gradually increased saturation values and decreased the pulse rate, followed by recovery from tachypnea and gas relief. After the procedure, the baby passed into sleep state following a significant relaxation. Until the next care session, a dim environment was created with covers to prevent direct contact of light, and the baby maintained physiological stability by continuing sleep function. During the procedure, Reiki application was found to decrease the physiological parameters of the baby gradually, and provided gas relief in the baby. There was a transition to sleep and marked relief in the baby after the procedure. Until the next care session, a dim environment was created with covers to prevent direct contact of light, and the baby maintained physiological stability by continuing sleep function (Figure 1, Table 2).
Conservation of structural integrity	In this step of the model, no nursing diagnosis was made for Reiki application, and routine care was presented to the baby.			
Conservation of personal integrity	-The environment of the neonatal intensive care unit, which is different from the intrauterine environment (in terms of stimuli, such as sound, light, smell) -Separation from primary caregiver (mother) that will provide emotional support -Inability to feed at the mother's breast, the primary caregiver that will provide emotional support for the baby -Irritability against mild stimuli	<p>3. Disorganization in infant behavior due to premature birth, low oxygen saturation, and excessive stimulus.¹¹</p>	<p>Purpose and intervention: Reiki application was performed to the patient in order to regulate the disorganization in infant behavior</p> <p>Skin-to-skin contact was provided every time the mother came to the unit and kangaroo care was performed for at least 30 minutes, taking into account the agitation experienced by the baby</p>	It was observed that there was a significant relief in both the Reiki application and the skin-to-skin contact, the crying stopped and the tachypnea decreased in the baby
Conservation of social integrity	-Having visitor restrictions -Having another child to be taken of, and experiencing stress due to not being discharged from hospital	<p>4. Risk of deterioration in parent-infant attachment due to disruption in supportive, protective, dynamic interaction between mother and baby.¹¹</p>	<p>Purpose: Ensuring mother-baby attachment</p> <p>Intervention:</p> <ul style="list-style-type: none"> -Reiki application was performed -Skin-to-skin contact was provided every time the mother came to the unit and kangaroo care was performed for at least 30 minutes -When the mother was not present, a special doll, which was allowed to stand on the mother's breasts, was placed in the incubator so that the baby can smell the mother 	It was noted that the parents used emotionally positive verbal expressions about the baby and the hospitalization process, after being involved in the care interventions

CPAP: Continuous positive airway pressure; OG: Orogastric; PA: Posteroanterior chest radiograph.

TABLE 2: Effect of 3-day Reiki application on physiological parameters.

Physiological parameters and application day	Before the procedure (1 st minute)	During the procedure (10 th minute)	After the procedure (5 th minute)
1st day			
General skin condition*	Cyanotic	Pale	Pink
Heart rate/min	176	162	147
SpO ₂ (%)	88	92	96
Respiratory rate	76	70	64
2nd day			
General skin condition*	Cyanotic	Pale	Pink
Heart rate/min	172	162	140
SpO ₂ (%)	88	93	95
Respiratory rate	74	70	62
3rd day			
General skin condition*	Dirty, cyanotic	Pale	Pink
Heart rate/min	172	150	147
SpO ₂ (%)	89	92	97
Respiratory rate	72	68	60

*The baby's skin general condition was evaluated according to the skin color assessment score in the unit nurse observation.

hour monitoring, the baby was followed up in neonatal intensive care unit with positive end-expiratory pressure (PEEP): 6 bubble continuous positive airway pressure, 8-flow oxygen due to the continuing moans, intercostal retractions and respiratory effort. The treatment was started with a fluid total of 50 cc/kg, and 5 cc feeding was planned to be increased by 3 cc in every 2 feedings. Increased respiratory effort, tachypnea, and a constant agitation were the important clinical symptoms of the infant.

TIMELINE AND PROCEDURE

The researcher has been actively practicing Reiki for 5 years. In line with the demands of the parents, it has been tested in clinics in babies with colic and children with toothache, and received positive verbal feedback. In the literature, it is recommended to apply Reiki with one 45-60-minutes session, or with 15-20 minutes sessions for 3-4 days.^{7,11} For this purpose, in order to balance the deterioration in the energy flow in the baby and to eliminate the discomfort in the sleep pattern, 15-minutes Reiki session was applied especially on the abdomen, chest and sole during the 3 days in the unit. The 3-day Reiki applications started when the baby was agitated and applied for an average of 15 minutes through light touches with the hands (Figure 1). Before starting the procedure, the practitioner washed her hands ac-

ording to the hygienic hand washing technique, heated them and did not use any disinfectant. In order to minimize temperature change and volume stressors, the procedure was applied through the incubator windows without opening the incubator (Table 1, Table 2).

Written and verbal consent was obtained from the mother of the baby whose personal information was used in the article, and verbal consent was obtained from the responsible nurse of the unit where the baby was observed.

DISCUSSION

Planning and implementation of care for infants treated in the neonatal intensive care unit is a concept that needs to be addressed in a versatile manner. During this process, the caregivers should not only focus on negative physiological changes, but also the psychosocial needs of the family should be taken into account together with the baby, and the support systems should be determined accordingly.

Using Levine's Conservation Model, our complementary, supportive and therapeutic interventions designed with the principles of conservation in the term newborn case, followed up by the diagnosis of tachypnea of the newborn, provided us with a holistic perspective and stimulated the internal and exter-

nal adaptation of the baby positively. The baby and the family adapted to this process quickly and maintained integrity. The use of nursing theories in clinical nursing practice and in specific cases is an important step in establishing scientifically sound foundations for the discipline of nursing. In this context, there is a need for clinical trials where the models are used.

Source of Finance

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Hilal Kurt Sezer; **Design:** Hilal Kurt Sezer, Sibel Küçükkoğlu; **Control/Supervision:** Hilal Kurt Sezer, Sibel Küçükkoğlu; **Data Collection and/or Processing:** Hilal Kurt Sezer, Sibel Küçükkoğlu; **Analysis and/or Interpretation:** Hilal Kurt Sezer, Sibel Küçükkoğlu; **Literature Review:** Hilal Kurt Sezer, Sibel Küçükkoğlu; **Writing the Article:** Hilal Kurt Sezer, Sibel Küçükkoğlu; **Critical Review:** Hilal Kurt Sezer, Sibel Küçükkoğlu; **References and Fundings:** Hilal Kurt Sezer, Sibel Küçükkoğlu.

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