The Journal of Neurological and Neurosurgical Nursing
Pielęgniarstwo Neurologiczne i Neurochirurgiczne

Wydawnictwo Państwowej Akademii
Nauk Stosowanych we Włocławku
ul. Mechaników 3, pok. 20
87-800 Włocławek

eISSN 2299-0321 ISSN 2084-8021
https://apcz.umk.pl/PNIN

DOI: 10.15225/PNN.2024.13.4.4 JNNN 2024;13(4):156–163 Case Report

Nursing Care Problems in a Newborn with Trisomy 21 — Case Report

Problemy opieki pielęgniarskiej u noworodka z trisomią 21 — opis przypadku

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Abstract

Introduction. Down syndrome (DS) is a genetic disorder caused by trisomy of the 21st pair of chromosomes. The incidence is approximately 1:900 live births. Down's syndrome is characterised by a number of phenotypic features, such as slanted eyes, diagonal wrinkles, a sandal groove on the sole of the feet, a transverse major line on the palm of the hand and developmental delay on each plane. The affliction is often combined with other co-morbidities such as hearing, vision, heart defects, fertility disorders and other.

Aim. The purpose of the paper was to highlight the specifics of caring for a newborn with Down's Syndrome who has been left by their parents in hospital.

Case Report. The patient described in this paper was a female neonate born by caesarean section at 39 weeks' gestation. Shortly after delivery, the baby was transferred to the Neonatal Pathology Ward, where she was placed in an incubator. During her stay in the ward, a genetic and endocrinology consultation was carried out. BCG and hepatitis B vaccination and all screening tests were performed. The mother's poor mental state prevented her from caring for the newborn. The baby had a good prognosis, but manifested several nursing problems, including increased crying, gastrointestinal problems and problems with food intake, drooling and reduced muscle tone.

Discussion. Children with Down's Syndrome are characterised by the presence of a wide variety of health problems, including those associated with reduced muscle tone, which has a direct effect on problems with food intake, difficulties in sucking and coordinating sucking, swallowing and breathing, gastrointestinal problems, and drooling. Thus, patient care should be comprehensive.

Conclusions. In the care of a newborn with Down's Syndrome, careful and continuous observation of the general condition, behaviour and the occurrence of any adverse symptoms is very important. **(JNNN 2024;13(4):156–163)**

Key Words: adoption, caesarean section, Down syndrome, newborn

Streszczenie

Wstęp. Zespół Downa (ZD) jest chorobą genetyczną, której przyczyną jest trisomia 21 pary chromosomów. Częstość występowania wynosi około 1:900 żywych urodzeń. Zespół Downa cechuje szereg cech fenotypowych, takich jak skośne oczy, zmarszczki nakątne, bruzda sandałowa na podeszwie stóp, poprzeczna linia główna na dłoni oraz opóźnienie rozwoju na każdej z płaszczyzn. Przypadłość ta często łączy się z innymi chorobami współistniejącymi, takimi jak zaburzenia słuchu, wzroku, wady serca, zaburzenia płodności i inne.

Cel. Celem pracy było zwrócenie uwagi na specyfikę opieki nad noworodkiem chorym na Zespół Downa, które zostało pozostawione przez rodziców w szpitalu.

Opis przypadku. Pacjentem opisywanym w pracy był noworodek płci żeńskiej urodzony drogą cięcia cesarskiego w 39. tygodniu ciąży. Tuż po porodzie dziecko zostało przeniesione na oddział Patologii Noworodka, gdzie umieszczono je w inkubatorze. W trakcie pobytu na oddziale odbyto konsultację genetyczną i endokrynologiczną. Wykonano szczepienie BCG oraz WZW typu B oraz wszystkie badania przesiewowe. Zły stan psychiczny matki uniemożliwiał jej opiekę nad noworodkiem. Dziecko rokowało dobrze, przejawiało jednak kilka problemów pielęgnacyjnych, m.in. wzmożoną płaczliwość, problemy gastryczne oraz problemy z przyjmowaniem pokarmów, ulewanie oraz obniżone napięcie mięśniowe.
Dyskusja. U dzieci z zespołem Downa występuje wiele problemów zdrowotnych, dotyczących obniżenia napięcia mięśniowego, które ma bezpośredni wpływ na problemy z przyjmowaniem pokarmu, trudności ze ssaniem i koordynacją ssania, połykaniem i oddychaniem, problemami żołądkowo-jelitowymi oraz ślinieniem się. Dlatego opieka nad pacjentem powinna być kompleksowa.
Wnioski. W opiece nad noworodkiem z zespołem Downa bardzo ważna jest uważna i ciągła obserwacja ogólnego stanu, zachowania i występowania ewentualnych objawów niepożądanych. **(PNN 2024;13(4):156–163)**
Słowa kluczowe: adopcja, cięcie cesarskie, zespół Downa, noworodek

Introduction

Down's Syndrome is a trisomy of the 21st pair of chromosomes. It is one of the most common autosomal chromosomal aberrations. This defect occurs in 1:640 live-born infants. Approximately 20 per cent of affected babies are stillborn, while up to 60 per cent are spontaneously aborted in early pregnancy [1,2].

Dysmorphic features are the first sign leading to the start of diagnosis after birth. These features include, but are not limited to: smaller head, slightly flattened in the occipital region, round and flat face, short nose with broader nasal tip, slanting eyes, narrow eye sockets, low-set ears, upturned lower lip, large tongue (macroglossia), short neck, short and broad feet and hands, palm and sandal groove present, rough and dry skin, impaired muscle tone.

The dysmorphic features mentioned earlier do not significantly affect the functioning of the body, but play a role in screening diagnosis as indicator features [3]. Among children with trisomy 21, in addition to dysmorphic features, major organ and systemic defects such as defects of the central nervous system, sensory system, cardiovascular system, genitourinary system, osteoarticular system, muscular system, respiratory system and gastrointestinal system are important complications. In every case of a child with Down's syndrome, there is a generalised delay in the growth of the brain, which is significantly smaller in volume and mass than that of a healthy child. This difference is least apparent immediately after birth in the newborn, but as the child grows, the delay increases to approximately 50% compared to healthy peers [4].

Newborns with Down syndrome may also be accompanied by heart defects, which occur with a frequency of 45–60%. The most common ascending heart defect in newborns with trisomy 21 is a common atrioventricular canal (cAVSD) and atrial septal defect. All newborns with Down syndrome (DS) have hypotonia and flaccidity of the ligamentous and articular systems. A very common disorder in newborns with DS is visual dysfunction, while hearing loss can affect up to 78% of children with trisomy 21. The least common defects in this group of children are defects of the gastrointestinal tract and defects of the genitourinary tract [4].

DS is also associated with different degrees of impairment. There is a distinction between moderate and severe intellectual disability. Depending on the degree of impairment, or the severity of the disease, people with the condition can undertake a variety of life activities — attending school with integrated Wards, going to work, having a social and commWardy life. Because of the developmental delay, therapeutic measures need to be introduced as soon as possible to make this possible. Research indicates that the greatest opportWardy is to start therapy immediately after birth and by the age of three at the latest. Unfortunately, being a carrier of trisomy 21 pairs of chromosomes is sometimes negatively perceived by society. Due to their different appearance and behaviour, such children are rejected by their peers. This is usually due to a low level of tolerance or lack of knowledge about genetic diseases. Down's syndrome is, however, a condition that can be lived with and function [4–8].

This paper describes a case of a newborn with suspected trisomy of the 21st pair of chromosomes. This information came as a shock to the parents/mother, as prenatal test results throughout the pregnancy were normal.

The child was forced to stay in the hospital ward for a long time. Initially, the parents could not decide whether they were ready to take on the care of their offspring. It was a difficult time for each party. The midwives, together with the doctors, had to take holistic care of the newborn and show understanding towards the baby's parents. They respected their decision and then took every step to compensate for the baby's lack of maternal warmth.

The purpose of the paper is to identify the specific care of the newborn with trisomy 21.

Case Study

A patient at 39 weeks' gestation presented to a hospital in Wrocław for a planned caesarean section. The midwife assessed the fetal heart rate using a cardiotocograph. The ASP was approximately 140 u/min, undulating oscillation with an amplitude of change of 20 u/min. There were multiple accelerations, no decelerations and the presence of fetal movements was noted. The patient was then prepared for elective caesarean section. The current pregnancy was managed by a gynaecologist. The patient attended regular appointments throughout the pregnancy. The patient's two older children were born by caesarean section, on time, with normal weights. The children are developing normally and are healthy.

At 12.51 p.m. a live-born daughter was extracted. The neonate's general condition was assessed as good, and in the first minute she scored 8 on the Apgar scale due to low muscle tone and peripheral cyanosis. In the following minutes (3, 5 and 10 minutes), she scored 9 on the Apgar scale. Her heart rate was approximately 100 beats per minute, with clear, steady tones. Due to her tendency to bradycardia, the neonatologist ordered the drug Dobutrex i.v. to be included. The doctor prophylactically deoxygenated the newborn. During the first examination, she found hypotrophy and decreased muscle tone in the baby. During the first examination of the newborn, phenotypic features characteristic of Trisomy 21 were found. The mother was informed. Consent was also obtained for diagnostic, therapeutic and prophylactic measures, including vaccination of the child.

The mother gave her consent to treat the child, however, the information about the disease came as a shock to the patient. The pregnancy was going well and the woman was expecting to give birth to a healthy daughter. After this information, her mental state deteriorated significantly.

Anthropometric measurements were taken and were as follows: body weight 2020 g, length 47 cm, head circumference 31 cm, chest circumference 30 cm.

Due to adaptation disorders, the baby was transferred to the Neonatal Pathology Ward, where the neonatologist ordered oxygen therapy FiO_2=23% and constant monitoring of saturation. The newborn was placed in an incubator that provided oxygen supply. During the first three hours of life, the neonate developed apnoea lasting 21 seconds. The baby's heart rate was approximately 80 u/min in the first minute after apnoea, SaO_2 approximately 88%. Later, accelerated and shallow breathing and additional respiratory muscles were observed. Passive oxygen therapy was administered. In the 10th minute, SaO_2 was 95%.

The newborn was given vitamin K 1 mg intramuscularly in the left thigh. During the first examination, the newborn was qualified for hepatitis B vaccination. The newborn was vaccinated with Euvax B intramuscularly, in the left thigh. The neonatologist consulted the patient's case with a geneticist. During this consultation, cytogenetic tests were ordered. Blood was taken for testing to determine the thyroid profile. After these were received, an endocrinology consultation took place. Hypothyroidism was diagnosed. Euthyrox medication was ordered at a dose of 6.25 ug, orally, once a day, fasting.

The mother, due to her poor mental state, expressed no desire to care for the newborn. The woman did not attempt natural feeding. On doctor's orders, a Hipp milk-substitute formula designed for low-weight newborns was given. After the feeding, the neonate was losing water.

The baby, on the first day of life, was in an incubator under constant supervision of the medical staff. The neonate's condition was described as stable.

On the newborn's second day of life, the neonatologist assessed her condition as good. Screening tests were ordered, including a hearing test, and an assessment of bilirubin levels. It was necessary to monitor the general condition, continue feeding with Hipp milk replacer for low-weight infants. The supply of glucose and the drug Euthyrox at a dose of 6.25 ug had to be continued. The supply of Dobutrex was to be continued at the same dose, while the infusion rate was changed, from 1 ml/h to 0.8 ml/h. In addition, oxygen therapy had to be continued and passive oxygen therapy FiO_2=21% was ordered. The newborn was qualified for BCG vaccination against tuberculosis.

The baby was fed with Hipp milk replacer for low-birth-weight infants every 3 hours. The newborn had difficulty sucking, was choking when swallowing, and was also drooling large amounts of food. The newborn was urinating and passing stool regularly. After 48 hours of life, capillary blood was collected for screening for phenylketonuria, cystic fibrosis, hypothyreosis and other metabolic defects.

The mother informed the staff of her considerations about placing the baby for adoption. The baby's father, at the time of the mother's visit, did not turn up at the neonatal Ward to meet the baby.

On the third day of life, the neonatologist assessed the newborn's general condition as good during the examination. The result of the cytogenetic examination confirmed the presence of trisomy 21 chromosome. The mother was informed of the result of the examination and reacted by crying. The woman was offered psychological counselling. The neonate's general condition was assessed as good, apnoea no longer recurred SaO_2 was 98%.

The neonatologist ordered a change of milk-substitute formula, due to the decrease in weight and the drooling. Bebilon modified milk for low-weight infants was given

every three hours. The neonate continued to have problems with sucking and swallowing, but the amount of milk that was shedding decreased significantly. The midwife adhered to the regularity of the feedings and the amount of milk given. She gave 20–30 ml of formula each time. On that day, the newborn passed 5 loose stools from 6 pm to 8 pm. For several hours she passed gas, her tummy was bloated.

The newborn was diagnosed with diarrhoea. An oral supply of the drug Espumisan drops was ordered — 8 drops to a bottle of milk. The newborn was urinating regularly. The baby was taken out of the incubator and stayed in a cot with an apnoea control mattress in the neonatal Ward. She adapted well in her new environment. The newborn was vigorous, crying loudly.

On the third day of the newborn's life, the mother was qualified for discharge from hospital. She had a discussion with the neonatologist. Due to her unwillingness to take care of the baby, the mother and the father continued their consideration of placing the baby for adoption. The nursing and obstetric staff informed the patient about the procedures related to adoption, as well as the possibility of a psychological consultation at the hospital. The newborn had to stay on the ward to monitor her condition. The mother was informed about the possibility of visiting and was also asked to bring care products, nappies and clothes. After the baby's father arrived, they said goodbye to the newborn together. The mother took her in her arms; the father did not express a desire to do so. The mother, having been discharged, left the hospital ward. From that moment on, the newborn was exclusively under the care of the medical staff.

Problem 1: Difficulties during Feeding of the Newborn Associated with her Reduced Muscle Tone

Purpose of nursing care: Comfortable and effective feeding with age-appropriate weight gain.
Nursing interventions:

1. Working together as a multidisciplinary team in caring for the child.
2. Ensuring appropriate positioning during bottle feeding.
3. Appropriate organisation of work on the ward to increase the time allocated to feeding the baby.
4. Ensuring correct positioning of the newborn.
5. Stabilising the baby's position during bottle feeding.
6. Selecting an appropriate dummy.
7. Keeping the baby's head in a semi-erect position during bottle feeding.
8. Frequent feeding of small portions of food.
9. Observing the patient during and after feeding for the occurrence of desaturation, cyanosis, volatilisation or vomiting.
10. Checking the number of nappies used.
11. Daily weight control at the same time of day.
12. Consultation with a physiotherapist, demonstration of feeding, lifting and holding techniques for the newborn.
13. Consultation with a neurologist, discussion of parental concerns and prognosis of further development of the newborn.

Justification of the actions taken: One aspect that distinguishes healthy children from those with Down's Syndrome is delayed psychomotor development. The cause of this condition is muscular hypotonia. A normal muscle tone in a newborn should allow the infant to counteract the force of gravity and maintain a correct position, with free movement. In the case of reduced muscle tone, the neonate is unable to hold the head in the correct position and does not resist when attempting limb movements. This can occur if the reflex arc is damaged. Special care should be taken when changing their position, lifting, feeding [9,10].

If the sucking reflex is disturbed, it is important to remember the correct position in which to feed the baby. It is necessary to hold the baby with the whole hands, which allows for comfortable breathing conditions, normalisation of muscle tension and calm eating. Stimulating the cheeks (supporting with the fingers) increases the portion of milk in the mouth. On the other hand, control of the cheeks and chin and control of the cheeks and jaw facilitate effective sucking during bottle feeding. By pressing a finger under the jaw, correct sucking is triggered. During bottle feeding, the staff should not be in a hurry; a lot of patience and calmness is required in this procedure. It is also necessary to give the newborn a rest between sucking. It is also important to observe sucking and to coordinate sucking, swallowing and breathing while eating [11].
Assessment: The use of proper technique during bottle-feeding and the timing of the procedure allowed for improved coordination of sucking and swallowing by the baby.

Problem 2: Onset of Apnoea in a Newborn Baby

Purpose of nursing care: No further apnoea incidents in the newborn.
Nursing interventions:

1. Monitoring of heart rate and respiratory rate.
2. Monitoring of oxygenation (pulse oximetry).
3. Monitoring of other parameters of general condition (temperature, RR).

4. Maintaining a constant body temperature by placing the baby in an incubator.
5. Application of passive oxygen therapy.
6. Laying the patient's head and neck in a neutral position.
7. Placing the baby on the stomach.
8. Mechanical stimulation (gentle rubbing of the soles of the feet or chest).
9. Monitoring with an apnoea mattress.
10. Encouraging parents to kangaroo the infant (maintaining skin-to-skin contact between parent and child).

Justification of the actions taken: Apnoea is a common breathing disorder observed in the neonatal period. We speak of apnoea when the pause in breathing lasts for more than 20 seconds and leads to a heart rate slowing below 80 u/min. In the majority of children, controlling the general condition and ensuring an optimal body temperature produces measurable results [10].

Monitoring the baby's basic vital signs allows the risk of apnoea to be assessed and rapid intervention to be made if necessary. Positioning the baby on the abdomen will improve diaphragmatic function, while positioning the head and neck in a neutral position has a great impact on maintaining airway patency. During skin-to-skin contact, the oxygen saturation of haemoglobin increases in the newborn, so it is worth encouraging parents to kangaroo the baby [12].

Assessment: The use of the above vomiting measures in a newborn with Down's syndrome yielded the expected results — the apnoea episode no longer occurred.

Problem 3: Discomfort of the Newborn Due to Drooling after Feeds

Purpose of nursing care: Reducing the discomfort of the baby caused by drooling.

Nursing interventions:

1. Consultation with GP about changing milk formula.
2. Reducing the portion of feeds given.
3. Increasing the frequency of feeds.
4. Taking care of the baby's position during feeds.
5. Maintaining the correct position of the infant after feeding.
6. Observing the baby.

Justification of the actions taken: Drooling is the expulsion of stomach contents associated with the rebound of air. It takes place up to several minutes after feeding. It can take place both after breastfeeding and after bottle feeding.

Several aspects need to be taken into account during the milk supply. One is the choice of the right feeding position — the newborn should be placed on the shoulder of the person by whom they are being fed. Another element is the supply of the formula at the right temperature. The milk should be at body or room temperature. The number of feeds and the amount of milk given is important. It is also worth paying attention to the teat. When turning the bottle over, the milk should flow out drop by drop. It is contraindicated to place the baby on their stomach after feeding. It has been shown that this can cause SIDS [13].

Assessment: The neonatologist decided to change the milk-substitute formula. The midwife reduced the portions of milk given and increased the frequency of feeds. She observed the baby after feeds. The newborn ate all the milk given, the daily kilocalorie intake increased.

Problem 4: Gastrointestinal Problems Associated with the Intake of Milk-substitute Formula

Purpose of nursing care: Eliminating gastric problems in the newborn baby.

Nursing interventions:

1. Observation of the newborn, assessment of general condition.
2. Consultation with the attending physician about changing the milk-substitute formula.
3. Feeding the baby more frequently with smaller portions of formula.
4. Regular changing of the newborn's nappy.
5. Care of the newborn's buttocks.
6. Using an anti-burn cream.

Justification of the actions taken: Breast milk is considered the most optimal food for a newborn baby, but it is not always possible to feed naturally. In some cases it is necessary to supplement or replace the mother's milk with a milk formula. Contraindications to breastfeeding are, for example, active AIDS, HIV infection, active untreated tuberculosis, the use of drugs contraindicated during lactation and others. Indications for supplementary feeding with milk-substitute formula also include hypoglycaemia in the newborn, decreased body weight (more than 10% in relation to birth weight), jaundice, illnesses in the newborn that prevent suckling, reluctance to suckle and psychological problems on the part of the mother [14].

Assessment: In accordance with the doctor's order, the milk-substitute mixture was changed. Portions of milk administered were reduced and more frequent feeds were introduced.

Problem 5: Newborn's Crying Associated with Lack of Contact with Mother

Purpose of nursing care: Reducing crying in the newborn baby.
Nursing interventions:

1. Talking to the mother about the benefits of contact with the baby.
2. Educating the mother about breastfeeding and the positives associated with it.
3. Holistic care of the newborn undertaken by medical staff.
4. Satisfaction of the newborn's need for closeness by the midwife.
5. Ensuring the correct conditions in the room in which the newborn is housed.
6. Carrying out a relaxing massage of the baby's body.
7. Kangarooing the newborn by the nursing and midwifery staff.

Justification of the actions taken: The first contact between mother and newborn usually takes place shortly after birth. It is called skin-to-skin contact. Its duration is regulated by the Regulation of the Minister of Health of August 16, 2018 on the organisational standard of perinatal care. It should last for 2 hours. Skin-to-skin contact involves placing the baby on the chest of the mother, father or another person. The newborn is not wearing clothes at this time, and is covered with the kangaroo person's shirt or blanket. The lifting of the chest, the heartbeat and the warmth of the skin mimic intrauterine conditions, which calms the newborn. Skin-to-skin contact, in addition to calming the baby, provides an opportWardy for the baby's skin to be colonised by the caregiver's bacterial flora. This has a positive effect on the baby's immWardy [14,15].
Assessment: Due to the medical staff's provision of closeness to the newborn, the baby's crying decreased. In addition to carrying out medical activities, the midwives tried to provide closeness to the baby. They stimulated her senses through massage and touch, and placed her on the breast. The hospital staff became very close to the newborn baby.

Discussion

Children with Down's Syndrome are characterised by the presence of a wide variety of health problems, including those associated with reduced muscle tone, which has a direct effect on problems with food intake, difficulties in sucking and coordinating sucking, swallowing and breathing, gastrointestinal problems, and drooling. Children with DS experience generalised brain growth retardation.

Olchowik et al. in their article address the problem of reduced muscle tone in children with Down Syndrome. They consider it to be the main cause of psychomotor retardation. According to the researchers, reduced muscle activity leads to the development of poor movement patterns [9].

Children with Down Syndrome also often have difficulty sucking and coordinating sucking, swallowing and breathing while eating. This may be due not only to reduced muscle tone (weakened respiratory muscles, lip, tongue and soft palate, but also to abnormalities resulting from CNS damage [11].

Due to reduced tension, the child is unable to coordinate sucking, swallowing and breathing correctly, which prevents her from taking feed directly from the mother's breast and may result in impaired feed intake from the bottle [16]. Early support of the newborn's development therefore becomes extremely important. A significant role in this process is played by the education of caregivers on methods of supporting normal child development by members of the interdisciplinary team, as well as psychomotor rehabilitation [16].

According to Banaszkiewicz and Dziekiewicz [14], suffocating is one of the most common problems in newborn babies. In order to find out its cause, a thorough interview with the person caring for the child should be taken. It is important to know whether the newborn is fed naturally or artificially, in what position they eat, in what quantities and how often. In the case of reduced muscle tone, the first action should be to increase the frequency of feeds and to reduce food portions. If there is a decrease in weight or if the rate of weight gain is too slow and the baby is fed on modified milk, a change in milk replacer should be considered.

In all cases of Down's Syndrome, there is a generalised delay in the growth of the brain, which reaches a significantly smaller volume compared to the brain of healthy children. However, this difference is least apparent immediately after birth, but increases with age up to 50% compared to healthy peers. The brain in Down's Syndrome is particularly characterised by underdevelopment of the frontal and occipital lobes. Sadowska and Mysłek-Prucnal and co-authors point out that the Down Syndrome brain differs from the normal brain in the number and organisation of cells. Quite characteristic is the reduction in neuronal density, which occurs in 80% of cases. Already at birth, the cerebral cortex has 30–50% fewer neurons, which is marked in the number of nerve cells. The reduced number of brain neurons correlates with the size of the brain. It has been shown that the direct cause of degenerative changes in the brain is excessive free radical-mediated damage to biological membranes, resulting in damage to brain cells and tissues [4].

The apnoea that occurred in the aforementioned newborn is often a consequence of CNS abnormalities, metabolic disorders, cardiovascular abnormalities or upper airway defects. There are four types of apnoea: central, obstructive, complex and diaphragmatic. The most common form of apnoea is complex apnoea. Other forms occur sporadically. Apnoea treatment should be based on a comprehensive approach. In addition to monitoring the general condition and maintaining a constant ambient temperature, pharmacological treatment (caffeine) is also important [10].

In their article, Bajek et al. describe the impact of touch on the social and psycho-intellectual development of the child. They cite a study showing that children left without parents in an orphanage were more likely to be sick, depressed and sad. This was also true for children undergoing long-term treatment in a clinic, who lost weight faster despite adequate nutrition. They died more often than children who had parental care. Zagórska draws similar conclusions in her article. She emphasises the fact that closeness to the parents sensitises the newborn to touch. The warmth of the parent has a positive effect on the baby's sense of security. It also creates a bond between mother and child. It is the quality and not the quantity of contact that counts. Newborns who are cared for and close to their mothers from an early age are less prone to depression and aggression, develop better, do not cause problems at school and do not have difficulties in making contact with their peers [17,18].

According to researchers Rozalska-Walaszek, Lesiuk and Aftyka et al., nurses and midwives working in the NICW should remember that the parents of a sick child also need support. They should be encouraged to undertake care, observe and participate in the patient's life. It is also worth drawing their attention to positive reactions on the part of the neonate, such as calming down, grimaces of satisfaction or opening of the eyes. This has a positive effect on the bonding between the family [19].

The described case of a neonate born by caesarean section manifested nursing problems, such as reduced muscle tone, problems with the coordination of the sucking and swallowing reflexes, drooling and gastrointestinal problems, among others. The newborn was characterised by increased crying due to the absence of the mother's presence. Due to the long stay in the ward caused by the diagnosis for Down's Syndrome, the baby remained in hospital under the care of staff from the Neonatal Ward.

Conclusions

1. The main element in the organisation of care for a newborn with Down's syndrome is the cooperation of the whole therapeutic team in the reference hospital — the neonatologist, the geneticist, the nursing and obstetric team from the neonatal ward, the laboratory diagnosticians and the physiotherapist.
2. Early diagnosis allows rapid medical action to be taken and benefits the further development of the sick child.
3. In the first days of a baby's life, contact with the parents is very important and they should be involved in carrying out care tasks such as feeding and dressing.
4. Kangaroo care and the provision of maternal warmth reduces the infant's crying.
5. If the parents leave the baby, the caring role of the nursing and obstetric staff is extremely important.

Implications for Nursing Practice

In the care of a newborn with Down's Syndrome, careful and continuous observation of the general condition, behaviour and the occurrence of any adverse symptoms is very important. The standard of care should be to include the parents as members of the interdisciplinary team. The care of a neonate with DS should be holistic and the most essential element in the organisation of neonatal care is the early involvement of the entire therapeutic team in the reference hospital — the neonatologist, the geneticist, the nursing and obstetric team from the Neonatal Ward, the laboratory diagnosticians and the physiotherapist.

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Conflict of Interest: None
Funding: None
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A — Concept and design of research, B — Collection and/or compilation of data, C — Analysis and interpretation of data, E — Writing an article, F — Search of the literature, G — Critical article analysis, H — Approval of the final version of the article, I — Acquisition of assets [eg financial]

Received: 22.04.2024
Accepted: 6.06.2024