



The Relationship between Neonatal Transient Tachypnea and Maternal Disease in Newborns

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Dear Editor-in-Chief

Transient tachypnea of the newborn (TTN) is known as a clinical self-limited tachypnea syndrome caused by delayed clearance of fetal lung fluid. While the exact incidence is probably under-reported, it is estimated at 3-6 per 1,000 term newborn births, making TTN the most common etiology of tachypnea in the newborn (1). Infancy is a very vulnerable time for a baby completing and regulating many of the physiological mechanisms necessary for extra uterine life (2). The most important differential diagnosis of TTN is the Respiratory Distress Syndrome (RDS). RDS is caused by inadequate production of pulmonary surfactant and it is a major cause of morbidity and mortality in preterm infants. The incidence of RDS increases with decreasing gestational age, and infants born before 30 weeks of gestation are at the greatest risk. Furthermore, > 40% of pre-term deliveries result in TTN due to the delayed absorption and clearance of fetal alveolar fluid. While TTN has been limited spontaneously within 48-72 hours after birth (3).

Neonatal respiratory disorders can cause many problems in adulthood, so the aim of this study was to determine the relationship between transient tachypnea of the newborn and maternal diseases in newborns admitted to Razi Hospital in Ahvaz, Khuzestan, Iran in 2018.

This study was descriptive-cross-sectional and retrospective and the number of samples was equal to 200 mothers in accordance with the conditions of entry into the study, selected as a census. The information was collected by the checklist and by the researcher using the patients' medical records. It was then examined by SPSS22 software (Chicago, IL, UDA) and descriptive statistics.

The average age of the mothers was 27.5 ± 5.89 years. 103 (51.5%) mothers were under 27 yr of age. The mean gestational age of mothers was 37.5 ± 2.05 weeks. 50 (25%) mothers were 38 weeks pregnant. Three (1.6%) mothers used drugs and 24 (12.7%) smoked. 117 (58.5%) of the mothers did not have any diseases during pregnancy and 33 (16.5%) had gestational diabetes. Overall 130 (64.8%) mothers had a cesarean section. Forty-nine of the mothers (24.5%) had three previous pregnancies and 58 (29%) had one delivery. Two (1%) mothers had three abortions and 13 (6.5%) mothers had two miscarriages. Overall 137 cases (68.5%) were male newborns. The average baby's birth weight was 3084.60 grams. The average score of Apgar of the first minute was 8.19 and the average score of Apgar of the fifth minute was 9.94. 12 cases (6%) were twins.



It seems necessary to pay attention to the mother's condition and her illnesses during pregnancy, to compile a medical record for all these mothers, follow-ups and regular visits by the health care system are necessary. Controlling blood sugar of pregnant mothers and the necessary medical measures in cases of gestational diabetes, controlling and treating other diseases such as asthma, paying attention to the mother's diet and not using tobacco are important in reducing the prevalence of this acute respiratory problem in newborns. Moreover, according to the recommendations of WHO about cesarean delivery at the end of the 39th week of pregnancy, refusing to do this delivery at 38 weeks will significantly reduce the incidence of transient tachypnea of the newborn.

With adequate education during pregnancy and regular participation of mothers in natural childbirth training courses and using modern medical science and facilities, pregnant mothers can be encouraged to have natural childbirth, which plays an important role in preventing transient tachypnea of the newborn. Any action taken to reduce neonatal respiratory problems, including

Transient tachypnea of the newborn, will save a lot of health care facilities.

Conflicts of interest

The authors declare that there is no conflict of interest.

References

1. Yurdakok M, Ozek E (2012). Transient tachypnea of the newborn: the treatment strategies. *Curr Pharm Des*, 18(21):3046-9.
2. Khooshideh M, Mirzarahimi T (2017). The Comparison of Maternal and Neonatal Outcomes of Normal Vaginal Delivery versus Unplanned Cesarean Section Delivery. *J Ardebil Univ Med Sci*, 17 (1) :122-132.
3. Tsuda H, Kotani T, Nakano T, Imai K, Ushida T, Hirakawa A (2018). The rate of neonatal respiratory distress syndrome/transient tachypnea in the newborn and the amniotic lamellar body count in twin pregnancies compared with singleton pregnancies. *Clin Chim Acta*, 484:293-297.