

Correlation between Neonatal hypothyroidism and maternal thyroid disease: a study in Ardabil – 2021

Abstract

Background: Due to the very high complications of neonatal hypothyroidism in the country, neonatal screening program is performed for timely diagnosis and treatment of neonates. On the other hand, studies have shown the effect of maternal hypothyroidism as a pregnancy complication and its adverse effects on fetal health and development. Has not specifically addressed the relationship between neonatal hypothyroidism and maternal thyroid status; Therefore, we decided to design a cross-sectional analytical study to investigate the relationship between this disease and open the field for further studies.

Aim: To determine the relationship between neonatal hypothyroidism and maternal thyroid disease

Materials and methods: The statistical population of the study was neonates with a diagnosis of hypothyroidism. Cochran sampling formula with limited population size was used for sampling. According to a similar study and considering the number of statistical populations in Ardabil city which is equal to 400 people and with 95% confidence level, 195 people were sampled.

Results: In terms of medical history, 21.0% of mothers had a history of thyroid disease. There was no statistically significant relationship between maternal age and infant TSH ($P>0.05$). There was no significant relationship between the history of maternal hypothyroidism and maternal hypothyroidism (during experiments) with the amount of TSH in the newborn ($P>0.05$). There was a direct and significant relationship between maternal TSH level and maternal FREE T4 ($P<0.05$). But there was no statistically significant relationship between infant TSH level and maternal TSH level and FREE T4 ($P >0.05$). There was no significant difference in neonatal TSH levels with maternal ANTI TPO status ($P>0.05$). There was no significant relationship between the history of maternal diabetes and the history of maternal hypertension with neonatal TSH ($P>0.05$). There was no significant difference in neonatal TSH levels by maternal thyroid status ($P>0.05$).

Conclusion: In the present study, no significant relationship was found between the incidence of neonatal hypothyroidism and the presence of thyroid disease in mothers. The existence of different genetic and environmental factors and the significant impact of each of these factors can justify this result.

Keywords: TSH, hypotension, neonatal hypothyroidism