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INTRODUCTION

This study was aimed to analyze the demographic and clinical data of the patients who were followed up for hypothyroidism and to determine the frequency of having permanent hypothyroidism.

METHODS

A total of 209 patients with hypothyroidism were included in this study retrospectively. Demographic data (age, sex, body mass index, height, birth weight, birth method, birth week), clinical features and laboratory data (Thyroid antibodies, TSH, fT4, thyroid volume, follow-up time, medication used for treatment) were recorded. In addition, thyroid ultrasound and scintigraphy records were used. These patients were divided into three groups according to serum TSH and sT4 levels during the 3-years treatment and follow-up period. Those with high serum TSH levels and those with normal sT4 levels were considered as subclinical hypothyroidism, those with normal TSH levels and fT4 were temporary hypothyroidism, and those with high TSH levels and low sT4 levels were considered permanent hypothyroidism. Comparison was made between the groups according to the TSH, fT4 level, thyroid volume, thyroglobulin level, gender, delivery method, birth week and chromosomal anomaly (Down syndrome) data.

RESULTS

45% (94) of the patients were female and 55% (115) were male. The anatomical structure of hypoplasia was 8.1% agenesis, 1% hypoplasia and 90.9% normal. 29.7% of the patients were temporary, 58.9% permanent and 11.5% were subclinical hypothyroidism. 27% of men are temporary, 57.4% are permanent and 15.7% are subclinical hypothyroidism. 33% of the girls were temporary, 60.6% of them were permanent and 6.4% of them were subclinical hypothyroidism.

The first admission of the cases was 3 days at the earliest and 1485 days at the latest, with an average of 98.49 days. The duration of treatment was the shortest 2 months, the longest 94 months, and the average was 41.99 months. Body weight SDs mean was -0.69, height average was 57.8±11.08 cm, weight average was 113.5 and birth weight was 2933 gr.

1.6% (1) of the temporary hypothyroidism was permanent, 14.6% (18) was subclinical and 12.5% (3) was with down syndrome.

Those with both temporary and permanent hypothyroidism had higher TSH than subclinical ones, and this difference was statistically significant (p <0.05).

Those with transient hypothyroidism had higher thyroid volumes than permanent ones, and this height was statistically significant (p <0.05).

There was no statistically significant difference in the rate of transient and subclinical hypothyroidism in Down syndrome patients. Permanent hypothyroidism was higher than transient and subclinical ones, and this rate was statistically significant (p <0.05).

There was no statistically significant difference in terms of thyroid volume between those with subclinical hypothyroidism, those with temporary hypothyroidism and those with permanent hypothyroidism (p >0.05). In patients with temporary and permanent hypothyroidism, no statistically significant difference was observed in terms of TSH values (p >0.05).

	Temporary	Permanent	Subclinic	P value
TSH	Median 39(0,08-100)	Median 23,5(0,01-133,9)	Median 7(0,67-42,2)	P2:0,001* P3:0,001* P1:0,635
Thyroid Volume	0,69(0,11-2,44)	0,5(0-2,7)	0,65(0,11-3,1)	P2:1, P3:0,062, P1:0,001*

Table 2: Comparison of sex, chromosomal anomaly, delivery method, time of delivery and birth weight according to hypothyroidism type (Chi-square test)

		Geçici	Kalıcı	Subklinik	P değeri
sex	male	%50(31)	%53,7(66)	%75(18)	0,101
	female	%50(31)	%46,3(57)	%25(6)	
	total	62	123	24	
Birth method	ceserean	%38,7(24)	%57,7(71)	%50(12)	0,051
	Vaginal birth	%61,3(38)	%42,3(52)	%50(12)	
	total	62	123	24	
Birth time	Premature	%12,9(8)	%20,3(25)	%20,8(5)	0,437
	Mature	%87,1(54)	%79,7(98)	%79,2(19)	
	total	62	123	24	
Birth weight	Low birth weight	%9,7(6)	%15,4(19)	%25(6)	0,442
	Normal birth weight	%90,3(56)	%84,6(104)	%75(18)	
	total	62	123	24	
chromosomal Anomaly	Down Syndrom	%1,6(1)	%14,6(18)	%12,5(3)	0,023*
	Normal	%98,4(61)	%85,4(105)	%87,5(21)	
	total	62	123	24	

Table 2: Comparison of sex, chromosomal anomaly, delivery method, time of delivery and birth weight according to hypothyroidism type (Chi-square test)

There was no statistically significant difference in terms of gender, delivery method, birth week and birth weight according to the type of hypothyroidism (p >0.05).

In patients with transient hypothyroidism, permanent hypothyroidism, subclinical hypothyroidism, thyroglobulin values were cut-off 104, 34, 40.6 respectively, while sensitivity was 55.77%, 72.12, 70%, and specificity was 100%, 84.21%. It was found as 75%.

In patients with transient hypothyroidism, persistent hypothyroidism, subclinical hypothyroidism, TSH values were cut-off 10.3, 10.5, 10, respectively, while sensitivity was 100%, 100%, 100%, specificity 88.4%, 75.96%, Found to be 25.

In patients with transient hypothyroidism, permanent hypothyroidism, subclinical hypothyroidism, the cut-off values of sT4 are 0.92, 0.93, 0.90, respectively, while sensitivity is 100%, 100%, 100%, specificity is 100%.

Hypothyroid	Birth weight ± sd	P value	Birth week ±sd	P Value
temporary	2991,47 ± 524,93	0,4	38,76 ± 2,32	0,45
permenent	2926,98 ± 570,79		38,21 ± 2,78	
subclinic	2820 ± 678,79		38,29 ± 2,61	

Table 4.6: Evaluation of birth weight and week of birth according to hypothyroidism type (Chi-square test)

When the distribution of the mean birth weight and the mean birth week throughout hypothyroidism types were analyzed there were no statistically significant difference detected in terms of birth weight and birth week in hypothyroidism types (p >0.05) (Table 4.6).

CONCLUSION

Hypothyroidism is an important endocrine disease that affects growth and neurological development when children are not diagnosed and treated early. Determining the etiology and type of hypothyroidism plays an important role in the treatment and follow-up of patients. Hypothyroidism continues to take an important place. When hypothyroidism is detected early, morbidities accompanying hypothyroidism will also decrease. Studies comparing patients with subclinical hypothyroidism, transient hypothyroidism and permanent hypothyroidism are limited and therefore we think that our study will contribute to the literature.

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