



STUDY ON PREVELANCE OF HYPOTHYROIDISM IN CHILDREN

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ABSTRACT

**Background:** The prevalence of hypothyroid in the developed world is estimated to be about 4-5% while subclinical hypothyroidism is estimated to be about 4-15%. **Aim:** To evaluate the prevalence of hypothyroidism in children in our hospital. **Materials and Method:** In this retrospective study all male and female children suspected of having hypothyroidism were included. Blood samples were taken from all the suspected cases for T3, T4 and TSH estimation. **Results :** Prevalence of hypothyroidism was found to be 1.75%. Out of 21 hypothyroid children, 07(33.3%) were males and 14(66.7%) were females. **Conclusion :** We conclude that Since hypothyroidism can lead to cardiovascular diseases in the long run, it is advisable to identify this disorder as soon as possible so that effective treatment can be started immediately and measures can be taken for prevention and early treatment of complications which are associated with it.

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INTRODUCTION

The prevalence of hypothyroid in the developed world is estimated to be about 4-5% while subclinical hypothyroidism is estimated to be about 4-15%.<sup>1</sup> Congenital hypothyroidism (CH), occurring in approximately 1:2000 to 1:4000 newborns<sup>2</sup>, is one of the most common preventable causes of intellectual disability.<sup>3</sup> In the children, thyroid hormones are principally concerned with the growth and metabolism of the child along with the mental development. Deficiency of these hormones leads to irreparable damage to the growth and development, both physical as well as mental of the child.<sup>4</sup> Only less data are available on the prevalence of hypothyroidism in children throughout the country. This retrospective study was done to assess the prevalence of hypothyroidism among children. Since in the long run, hypothyroidism can lead to cardiovascular diseases, it is advisable to identify this disorder as soon as possible so that effective treatment can be started immediately.

MATERIALS AND METHODS

A retrospective study was carried out in our hospital over a span of one year in which 54 children who were suspected of having hypothyroidism were included. Blood samples were taken from all the suspected cases for T3, T4 and TSH estimation. The finding of an elevated serum TSH level and a low free T4 or total T4 confirms the diagnosis of primary hypothyroidism.

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The finding of an elevated serum TSH with a normal free T4 or total T4 is consistent with subclinical primary hypothyroidism.

RESULT AND OBSERVATIONS

Out of 1200 children, 21 were found to be hypothyroid. Prevalence of hypothyroidism was found to be 1.75%. Out of 21 hypothyroid children, 07(33.3%) were males and 14(66.7%) were females.

Table 1 Age and Sex Distribution

Age	Male	Female
Newborn-<1 month	02	04
1-12 month	01	02
1-3 years	01	00
3-6 years	01	02
6-9 years	00	01
9-12 years	01	03
12-15 years	01	02
Total	07	14

DISCUSSION

In the present study, the prevalence of hypothyroidism is found to be 1.75%. The prevalence of hypothyroidism was 3.1 per 10,000 in males and 2.1 per 10,000 in females, and the total prevalence was 2.6 per 10,000 (0.03%) in the study done by Shehab a Alenazi *et al.*<sup>5</sup> A female predominance of 2:1 was observed over males in our study. This predominance of females was in accordance to the study done by Kapil *et al* who observed a ratio of 1:2.9.<sup>6</sup>

## CONCLUSION

We conclude that Since hypothyroidism can lead to cardiovascular diseases in the long run, it is advisable to identify this disorder as soon as possible so that effective treatment can be started immediately and measures can be taken for prevention and early treatment of complications which are associated with it.

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