Evaluation of Epicardial AdiposeTissue Thickness in Children Detected Subclinical Hypothyroidism

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INTRODUCTION

Childhood overt hypothyroidism is a chronic disease that affect many system adversely and requires treatment. However, subclinical hypothyroidism (SH) ,defined obvious cases, impacts on other systems are unknown and there is no common approach to be treated. Moreover, SH may continue for many years, before they become overt hypothyroidism. Cardiovascular system (CVS) is one of the host system , which hypothyroidism adversely affects. Epicardial adipose tissue thickness (EAT) is known to be an important marker in terms of the cardiovascular risks. We aimed to determine the effects on CVS of subclinical hypothyroidism .

PATIENTS AND METHODS

The study included were 25 patients with SH and 25 healthy children. SH was determined according to slightly higher TSH than the upper limit (4.2M/L),normal free T4 and T3 levels. EAT was determined by transthoracic echocardiographic measurements in millimeters, in pediatric cardiology clinic (figure1).

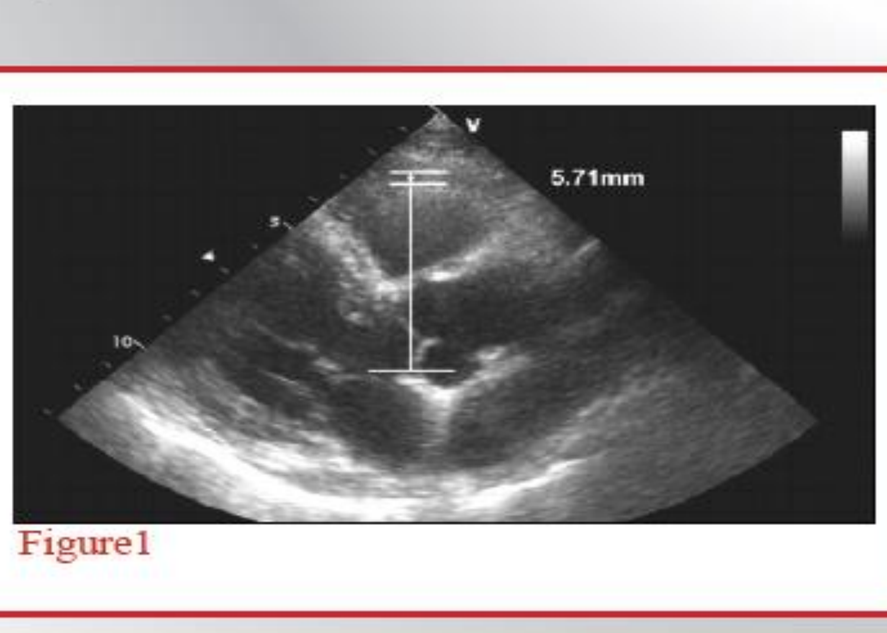

Figure1

RESULTS

Anthropometric measurements of all cases, thyroid function tests and EAT values are shown table 1. Epicardial fat thickness was significantly higher in SH children, than the children without thyroid dysfunction.

Table 1.

	SH	Control Group	P value
Age	8.28±4.75	8.69±3.9	p>0.05
Sex	F:11 M:14 16/9	F:10 M:15 17/8	p>0.05
Weight	25-50 *percentile*	50 *percentile*	p>0.05
Height	25-50 *percentile*	25-50 *percentile*	p>0.05
BMI	25-50 *percentile*	50 *percentile*	p>0.05
TSH	5.7±1.59	3.7±0.5	p<0.05
sT4	1,27±0.18	1.4±0.21	p>0.05
sT3	4,4±0.62	4.1±0.49	p>0.05
EFT	4.16±0.8	2.04±1.1	p<0.05

CONCLUSION

This study suggests that subclinical hypothyroidism effects adversly the cardiovascular system in children before hypothyroidism become overt. In future this data may be marker at the begining of LT4 treatment in SH with children.

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Thyroid

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