

## **ABSTRACT**

### **AIMS AND OBJECTIVES**

To study the thyroid profile in children on anticonvulsant monotherapy

### **METHODOLOGY**

It was a case control study in which 150 children attending medical op and admitted in medical wards on anticonvulsant monotherapy meeting the inclusion criteria were selected and 150 age and sex matched children were selected as controls. The study was conducted from January 2017 to September 2017. A detailed medical history, clinical examination was taken and all children were subjected to blood tests. Samples were tested for TSH, freeT3, freeT4 levels

### **RESULTS**

In this study TSH values were normal in 78.7% of the cases and elevated in 21.3% of the cases. p value was statistically significant. Out of those with an elevated TSH levels 78.1% were on sodium valproate, 18.8% were on phenobarbitone, 3.1% on carbamazepine. FreeT3 levels were low in 4% of the cases that was statistically insignificant. FreeT4 levels was low in only 6% of the cases which was statistically insignificant. All children had no symptoms of hypothyroidism. Thus those with elevated TSH levels were having a subclinical hypothyroidism.

### **CONCLUSION**

Thyroid profile was altered in children taking anticonvulsants. Significant changes were noticed in the TSH levels whereas freeT3 and freeT4 levels were not significantly elevated. Levetiracetam was the only anticonvulsant that did not have any effect on the thyroid status. Thus there is a risk of subclinical hypothyroidism in children on anticonvulsants and periodic monitoring of these children is necessary

### **KEYWORDS**

Anticonvulsants, TSH, freeT3, freeT4, subclinical hypothyroidism