

Evaluation of Antiepileptic Drugs' Effect on Thyroid Functions and Hematological Parameters in Epileptic Patients

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Abstract

Aim of study: Epilepsy is a chronic neurological disorder. Long-term antiepileptic drug use is associated with several metabolic and hormonal disorders. This study aims to investigate the potential effects of antiepileptic drugs on thyroid functions and complete blood counts. Methods: Epileptic adult patients followed up regularly were enrolled in the study. Laboratory parameters including serum thyroid hormone levels and complete blood counts were evaluated retrospectively. The effects of antiepileptic drugs on these parameters of the cases were investigated by comparing the laboratory recordings of the cases in the defined three periods [prior to antiepileptic drug treatment, in between 6 months to 1 year treatment (early stage) and after 1 year treatment (late stage)]. Results: A three hundred epileptic patients (F/M: 175/125) were included in the study. A statistically significant difference in TSH levels and sT4 levels in late stage compared to pre-treatment ($p=0.006$, $p=0.0005$, respectively). A statistically significant decrease was recorded in late stage mean leukocyte levels in comparison with pre-treatment levels ($p=0.025$). When pre-treatment and late stage mean thrombocyte levels were compared, a statistically significant decrease was observed in late phase ($p=0.001$). Conclusions: According to our study results, widely used antiepileptic drugs in the world have some effects on both thyroid functions and complete blood counts. It is important to emphasize epilepsy treating centers should monitor not only clinical features of the patients but also laboratory results periodically. Key words: epilepsy, antiepileptic drugs, thyroid functions, complete blood counts.

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