ABSTRACT

Background:
Serum concentration of certain lipids in young children is an important risk factor for the development of coronary heart disease in later life. Older-generation AEDs which are commonly used for the treatment of epilepsy including phenytoin, carbamazepine, phenobarbitone and valproate exert prominent effects on the hepatic enzyme system and may alter metabolic pathways that are related to increased vascular risks.

OBJECTIVE: To assess the effect of commonly used antiepileptic drugs on serum lipid levels in epileptic children

METHODS: The study population were divided into two groups: cases which includes children receiving AEDs for more than 6 months and controls as healthy children. A blood sample (3 ml) was drawn after an overnight fast and serum glucose, liver enzymes, total cholesterol, HDL-C, LDL-C, Triglycerides, VLDL-C were measured. All data were entered in Microsoft excel sheet and was imported to SPSS software. Analysis were performed using SPSS, Version 20.0

RESULTS: Enzyme inducer antiepileptic drugs like Carbamazepine and Phenobarbitone increases TC, LDL-C, TGs and lowers HDL-C. Phenytoin increases TC, TGs, and lowers HDL-C
Sodium valproate and Levitiracetam did not have significant changes in the serum lipid profile.

**Conclusion:** Anticonvulsant drugs especially the enzyme inducers significantly modify serum lipids in epileptic children. Newer generation AEDs like Levitiracetam is found to be safe to use in children who require long term anticonvulsant therapy

**KEYWORDS**
Antiepileptic drugs, total cholesterol, HDL cholesterol, LDL cholesterol, VLDL cholesterol, Triglycerides