

2nd International Conference on Epilepsy & Treatment

October 20-21, 2016 Rome, Italy

Effect of antiepileptic drugs on antioxidants in persons with epilepsy in Nigeria

Emmanuel Iwuozo

Federal Medical Centre, Nigeria

Epilepsy is one of the most common serious brain disorders prevalent in Africa including Nigeria. This study investigated the effect of antiepileptic drug (AED) therapy on serum antioxidants level in patients with epilepsy compared to healthy controls in the neurology clinic of two tertiary hospitals in Kaduna state, Northern Nigeria between June and December 2014. Seventy consenting patients with epilepsy made up of 35 persons who were ≥ 1 year on AEDs therapy and 35 newly diagnosed; against 35 age and sex matched healthy controls were recruited. The levels of antioxidants were determined by quantitative colorimetric method using assay kits. Statistical significance was determined using one-way analysis of variance (ANOVA) at a p-value of less than 0.05. One-hundred and five subjects were investigated. The mean age $\pm$ SEM of the patients on AEDs; newly diagnosed and controls were 33.91 ± 2.35 , 31.25 ± 2.48 and 33.31 ± 1.80 years respectively. The levels of the three enzyme antioxidants (superoxide dismutase (SOD), glutathione peroxidase (GSH-Px) and catalase (CAT)) were significantly decreased in the AEDs therapy group with GSH-Px and CAT of the AED therapy group being significantly more decreased than the newly diagnosed patients. This study also found significantly higher level of serum uric acid and malondialdehyde (MDA) in the patients on AEDs therapy. AEDs therapy significantly altered the level of antioxidants.

emmauzoiwuozo@yahoo.com

Neuroprotective role of argan oil against the development of status epilepticus in lithium-pilocarpine model of temporal lobe epilepsy in the Wistar rat

Ammouri H, Bahbiti Y, Ouichou A, El Hessni A, Nakache R, Berkiks I, Bekjdaouene L and Mesfioui A

Laboratory of Neuroendocrinology, Genetics and Biotechnology, Morocco

Temporal lobe epilepsy (TLE) is the most common form of human epilepsy. Patients with TLE often have a clinical history including an initial precipitating injury, such as status epilepticus (SE). In this regard, neuroprotective treatments are considered a promising therapy for preventing and treating TLE. Thus, being well known for its physical and chemical composition, particularly vitamin E and unsaturated essential fatty acids, we are interested in argan oil pretreatment in order to examine the neuroprotective effects on the development and severity of SE in lithium-pilocarpine (Li-PC) model of TLE. Wistar rats (21 days of age) were gavaged daily with argan oil or with NaCl (1 ml/100 g) during 3 months. SE was induced in adult rats by lithium (3 mEq/kg) followed 18 h later by pilocarpine (30 mg/kg), yet it is interrupted by diazepam (10 mg/kg) in all rats. SE severity and Racine stages are assessed by video-recording. The results of our study showed that pretreatment with argan oil have decreased the intensity of seizures. And the high percentage of resistance against the development of EDM and duration of prolonged silent phase in the group treated with argan oil. The current study suggests that argan oil pretreatment is capable of attenuating seizure severity of Li-PC induced SE. This indicates that argan oil provides a neuroprotection against the TLE.

amouri300@outlook.fr