STUDENTS' CORNER
LETTER TO THE EDITOR

Rethinking epilepsy management: The role of the ketogenic diet

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Dear Editor, In an era marked by innovative strides in medical science, the convergence of nutritional therapy and neurology offers a fascinating frontier for reimagining patient care. The ketogenic diet garners recognition for its multifaceted benefits—from enhancing glycaemic control and promoting significant weight loss to demonstrating promise in reducing seizure frequency. Its benefits in glycaemic control, improvement in Type 2 Diabetes Mellitus (a highly prevalent disease in our country), and significant weight loss have been well tested in the past,[1] Adding to this despite minor drawbacks, it has become a popular option among many. Yet, its effects as an Epilepsy treatment, although tested, have not been solidified in Pakistan. Epilepsy is a neurological disorder characterized by a persistent predisposition to generate unprovoked seizures. Traditionally, it has been defined as the occurrence of two or more unprovoked seizures separated by more than 24 hours.[2]

Current Anti-epileptic Drugs (AEDs) including sodium channel blockers, calcium channel blockers, and GABA antagonists have proven efficacious.[3] Still, the use of non-pharmacological techniques such as a ketogenic diet as a means of improvement in epilepsy has not yet been studied.

The reason behind the need for such non-pharmacological approaches, is due to the emergence of drug-resistant epilepsy and the multitude of adverse effects associated with use of AEDs.[4]

Furthermore, according to a study at Johns Hopkins, 51 children (aged 1-8 yrs) enrolled in the study with multiple seizure types, out of which 54% saw a fall of greater than 50% in seizure frequency by the 3rd to 6th month of starting Keto diet (p<0.001). It was also observed that, families continued the diet even after the study to minimize the adverse effects of traditional anti-epileptic medication, hence giving promising evidence of long-term adherence.[5]

In a clinical study by Elizabeth et al., after 3 months on the diet, the mean percentage of baseline seizures was significantly lower in the diet group by more than 50% compared to the control group. The inclusion criteria were that children were aged 2-16, with no prior keto diet history, and had failed to respond to at least 2 AEDs in the past.[6]

To conclude, the ketogenic diet emerges not merely as a nutritional regimen but as a visionary beacon that could redefine epilepsy management. Given the apparent and proven rise in adversities and drug resistance among traditional AEDs, and the emergence of this non-pharmacological intervention, which not only improves epilepsy but also manages to alleviate the adverse effects observed by pharmacological approaches, not to mention already proven benefits, this non-pharmacological intervention invites us toward a future of hope and innovation. We would highly recommend and encourage that further research and clinical trials on its impact in Pakistan be carried out.

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