EDITORIAL

Ketogenic Diet in the Management of Childhood Epilepsy

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The ketogenic diet has been used for the treatment of epilepsy in children for almost 100 years. Originally, it was determined that individuals with seizures found benefit from starvation; subsequently a diet was proposed which was high in fat content, the breakdown of fat for energy producing ketones and therefore mimicking starvation(1). This was subsequently found to be effective in treating recurrent seizures. Many open label studies over the years suggested considerable benefit could be achieved in children with epilepsy; it went out of favor with the advent of anticonvulsants but further interest in the 1990s led to an increase in evaluation and use. However, despite the belief in its efficacy, repeatedly systematic reviews commented on the lack of randomized controlled data(2,3). It was only last year that the first randomized controlled trial was published, defining without doubt the efficacy of the ketogenic diet in children with drug resistant epilepsy(4).

Over the past 10 years, an increasing number of publications have confirmed the considerable interest in its use. This has included the appreciation of its use worldwide(5). With increased data on implementation and alternative ways of giving the diet, a consensus document was drawn up by professionals around the world(6), including Dr Nathan responsible for the study published here(7).

The study published in this issue of *Indian Pediatrics* highlights how administration of the ketogenic diet with cultural adaptation is achievable and effective. The authors highlight the difficulties with the high drop out rate, but, accepting this to be an open label study, the efficacy is quite astounding. The cost effectiveness with reduction of anticonvulsants, let alone with the well being of the children, is self apparent. This aside, a certain degree of monitoring of individuals on the diet has been advocated(6). This study does not report the monitoring or supplementation undertaken, both important to document. Some of the concerns about bone mineralisation and vitamin D status may indeed not apply within the context of application within this climate, as opposed to in northern countries.

How long individuals need to be maintained on the diet remains in question and often is individually assessed. Some children on weaning do not return to their baseline seizure rate. It is commented within this paper that individuals with 100% efficacy were weaned from the diet. It is not clear at what point and whether improvement was sustained. Further follow-up of this group would provide useful data.

These comments aside, the ketogenic diet is demonstrated here to provide a feasible alternative in drug resistant epilepsy in children within an Indian culture. Although it cannot be regarded as a natural treatment, it may also prove a useful alternative to consider in resource poor situations; although a high degree of support may be required to maintain appropriate nutritional intake.

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