Do children and young adults with cerebral palsy profit from the supplementation of ω-3 and ω-6 fatty acids?

5 years experience with Equazen™ eye q as part of a multimodal management.

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Introduction

The «Center of Developmental Advancement and Pediatric Neurorehabilitation, C.D.N.» is a neuropediatric competence center for children and young adults diagnosed with acquired or innate brain damage and is endowed with a complex and extensive range of services. Within the multimodal treatment concept of the C.D.N. complementary (evidence based) therapeutic approaches are integrated alongside conventional (evidence-based) treatments. Optimization of the diet, especially by nutrient-adapted formulations, supplements extensively the holistic medical concept especially in children and young adults diagnosed with ADHD, autism and cerebral palsy (CP).

Background

Several studies stated that the polyunsaturated fatty acids are not only involved in the development and maturation of neuronal structures, but in particular play a central role in the functioning of the brain, not only during the developmental phase, but throughout the whole life span. The methodologically convincing «Oxford-Durham Study» (Richardson AJ, Montgomery P 2005) showed that dyspraxia symptoms including gross and fine motor deficits and as endued with a complex and extensive range of services. Within the multimodal treatment concept of the C.D.N. complementary (evidence based) therapeutic approaches are integrated alongside conventional (evidence-based) treatments. Optimization of the diet, especially by nutrient-adapted formulations, supplements extensively the holistic medical concept especially in children and young adults diagnosed with ADHD, autism and cerebral palsy (CP).

Results

Most patients (15/21) with GMFCS level 1 and 2 improved the quality and velocity, especially of the fine motor skills, compared to the GMFCS level 3-5 (10/60). Many patients had a remarkable improvement in behaviour and cognitive disabilities in general (attention, hyperactivity, anxiety, language processing, memory etc). Several of the severe handicapped patients (12/20) showed a better quality of life, in general better vigilance, stabilized mood and health situation (e.g. less infections, better sleep, less epileptic fits). Mild to moderate stomach upsets and diarrhea were the most typical, usually short-lived side effects. The acceptance of Equazen™ eye q chews and liquid was the best.

Conclusion

This retrospective data analysis shows that Equazen™ eye q can safely and effectively be integrated in multimodal treatment concepts for children and young adults with CP, especially for the associated disabilities. But long term controlled studies with larger patient population and uniform defined clinical characteristics are necessary to evaluate the therapeutic potential Equazen™ eye q for children with CP. In the C.D.N. the use of Equazen™ eye q in the multimodal treatment concept of children with specific needs is definitely established.

Objectives

What is the impact of Equazen™ eye q on the motor impairments and the associated disabilities [e.g. behavioural symptoms such as hyperactive, oppositional and destructive behaviours, speech disorders, epilepsy, emotional problems etc.] of children and young adults with cerebral palsy (CP) in an ambulatory and stationary setting? How is the acceptance of Equazen™ eye q (capsules, chews, liquid)? Are there any side effects?

Equazen™ eye q

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Equazen™ eye q 6 Capsules/chews</th>
<th>Equazen™ eye q liquid (15ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish oil (source of ω-3)</td>
<td>2600 mg</td>
<td>2600 mg</td>
</tr>
<tr>
<td>- eicosapentaenoic acid (EPA)</td>
<td>558 mg</td>
<td>558 mg</td>
</tr>
<tr>
<td>- docosahexaenoic acid (DHA)</td>
<td>174 mg</td>
<td>174 mg</td>
</tr>
<tr>
<td>Evening Promrose Oil (source of ω-6)</td>
<td>600 mg</td>
<td>600 mg</td>
</tr>
<tr>
<td>- γ-linolenic acid (GLA)</td>
<td>60 mg</td>
<td>60 mg</td>
</tr>
<tr>
<td>Natural vitamine E</td>
<td>11 mg</td>
<td>6 mg</td>
</tr>
</tbody>
</table>

Methods

Since 2007/2008 a total of 81 patients with CP aged between 2-30 years were followed up. They have been treated for at least 1 year with Equazen™ eye q (2 – 6 capsules/chews per day or 5 –15ml liquid per day). In the first 6 months all other therapies were kept unchanged. In the beginning and every 3rd to 6th month the multidisciplinary group (neuro-pediatrician, psychologist, physio-, occupational or speech therapist, nurse, special educator) and the parents recorded symptoms, treatment results and adverse effects using standardised assessments of each therapy, questionnaires and interviews.

References