



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 (experience 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 well learning and psychosocial difficulties are improved by a specific combination of the long-chain ω -3 fatty acids eicosapentaenoic (EPA) and docosahexaenoic acid (DHA) and ω -6 fatty acid (γ -linolenic acid, GLA) with a ratio of 9:3:1 (**Equazen™ eye q**).

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 diarrhoea 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

Ingredient	Equazen™ eye q 6 Capsules/chews	Equazen™ eye q liquid (15ml)
Fish oil (source of ω -3)	2400 mg	2400 mg
- eicosapentaenoic acid (EPA)	558 mg	558 mg
- docosahexaenoic acid (DHA)	174 mg	174 mg
Evening Promrose Oil (source of ω -6)	600 mg	600 mg
- γ -linolenic acid (GLA)	60 mg	60 mg
Natural vitamine E	11 mg	6 mg



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.

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