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DAILY CONSUMPTION OF A DAIRY DRINK ENRICHED WITH DHA, VITAMINS AND MINERALS ENHANCED NUTRITIONAL STATUS AND COGNITIVE ABILITIES PARAMETERS

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Rationale: Preadolescence is a period of growth with special nutritional requirements. In this research we investigated the effects produced by a 5-month consumption of an enriched dairy drink on biochemical and cognitive development parameters in children.
Methods: 119 children (8–14y) of both genders (male 49%, female 51%) were randomly distributed into two study groups. The supplemented group (SG, n = 60) consumed 0.6 L/day (breakfast, elevenses and teatime) of an enriched dairy drink containing fish oils (high in DHA), oleic acid, carbohydrates (sugar and honey), vitamins (A, B complex, C, D, and E) and minerals (calcium, phosphorus, zinc) (Puleva Max®). The control group (CG, n = 59) consumed 0.6 L/day of standard whole milk. Both groups received the same dietary advice and consumed the dairy drinks for 5-moths, in addition to their usual diet. Blood samples and psychometric tests (some subscales of W.I.S.C.-IV of Wechsler and EVALUA of Vidal) were taken at 0 and 5 months. RM ANOVA was applied. Data are expressed as mean±SEM.
Results: The consumption of the enriched dairy drink (SG) produced significant ($p < 0.05$) increases in plasma DHA (20%) and calcium (1.5%). Total proteins (1.9%), transferrine (2.1%), total cholesterol (3.3%) and HDL-cholesterol (5.2%), but not LDL-cholesterol, decreased significantly in CG. Regarding psychometric parameters, digits span (working memory test), speed reading and reading comprehension scores showed significant increases in SG at the end of the study (16.8%, 19.1%, and 19.0% respectively) whereas CG only showed higher scores in the reading comprehension test (19.2%).
Conclusion: The dietary supplementation with the enriched dairy drink improved the nutritional and biochemical status and a number of cognitive performance markers in children of 8 and 14 years. Supported by Puleva Food SA.

Disclosure of Interest: E. López-Huertas, Company Ebro Puleva, Researcher. JJ. Boza, Company Ebro Puleva, Researcher. J. Fonollá, Company Ebro Puleva, Researcher.

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SUCCESSFUL TREATMENT OF UNUSUAL VARIATION OF GASTROINTESTINAL SMOOTH MUSCLE ABNORMALITIES ASSOCIATED WITH NEONATAL-ONSET CHRONIC INTESTINAL PSEUDO-OBSTRUCTION

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Rationale: The clinicopathological spectrum of GI smooth muscle abnormalities associated with chronic intestinal pseudo-obstruction (CIPO) includes numerous heterogeneous conditions that are often ill-defined and poorly understood.
Methods: A 3-day-old male infant was admitted due to delayed passage of meconium, bilious vomiting and a markedly distended abdomen. He had been born after a full-term, normal pregnancy. His birth weight was 3,250 g. He had no significant family history. Barium enema study demonstrated small caliber colon and presence of distal small intestinal obstruction. At laparotomy, the entire colon and the distal 20 cm of the ileum were narrowed in caliber. An ileostomy was made at a site 20 cm proximal to the ileum end. Histological examination of the terminal ileum demonstrated as follows: 1) a segmental transposition of inner circular and outer longitudinal layer of muscular propria 2) focal thinning of longitudinal muscle layer with fibrosis, 3) intact ganglion cells in the nerve plexus. However, symptoms and signs of intestinal obstruction were recurred after ileostomy. Re-do ileostomy at a site 15 cm proixmal to the first ileostomy and loop jejunostomy at a site 70 cm distal to the Treiz ligament were performed. He was discharged with against medical advices. At the age of 125 days, the patient readmitted due to failure to thrive (body weight 2,500 g). Parenteral nutrition and continuous enteral feeding via nasogastric tube with protein hydrolysates were instituted. TPN calories and protein were maintained at 100 Kcal/kg/d and 3 g/kg/d respectively, while targeting a daily weight gain of 20–30 g. Continuous distal ileostomy drip feeding with the secretion of the proximal stoma was tried, which was failed due to acquired ileal atresia. Resection of the atretic segment, restoration of jejunostomy and re-do ileostomy were performed. After a follow-up barium study at the age of 12 months, closure of the ileostomy was then performed. TPN was tapered and body weight of the patient had increased to 9.6 kg.
Conclusion: This case has unusual form of visceral smooth-muscle abnormality not conforming to the diagnostic criteria of known primary visceral myopathy. Visceral myopathies presented with CIPO in newborn period mostly carry a poor prognosis and long-term parenteral nutrition may be required to maintain nutrition.

Disclosure of Interest: None declared