Friday, 12 September 2014

Oral presentations 09:00–10:35

04. Growth and nutrition

O-19  
Is diet the environmental factor that is responsible for IBD?  
A. Levine*. Wolfson Medical Center, Tel Aviv, Israel

Crohn’s disease (CD) is a complex inherited disease, arising at the interface between the luminal commensal bacteria and the intestinal epithelium. It arises in genetically susceptible individuals, and involves an abnormal immune response to luminal or mucosal bacteria. Under normal circumstances, the mucous layer, intestinal epithelial cells and the tight junctions serve as an efficient barrier to exclude enteric bacteria from penetrating or interacting with lamina propria immune cells. Recent evidence suggests that Crohn’s disease may involve genetic or environmental factors that impair the normal innate immune system’s ability to contain bacteria to the lumen. Multiple dietary components may impact on the resident flora, generating dysbiosis diminishing or damaging the mucous layer, increase intestinal permeability or increase the ability of pathobionts to adhere to epithelial cells or translocate across the epithelial barrier. The possible effects of different dietary components present in Western diet that could be linked to Crohn’s disease will be reviewed.

O-21  
Growth retardation: pathogenesis and therapeutic interventions  
S. Kolacek*. Children’s Hospital, Zagreb, Croatia

Growth failure affects 10%-40% of all IBD paediatric patients, and it is twice as common in Crohn’s disease compared to ulcerative colitis. Moreover, up to 30% of children with Crohn’s disease fail to achieve their full growth potentials developing into the stunted adults. It is therefore of no surprise that in the most recent ECCO/ESPGHAN Consensus Guidelines it was stated that ‘growth and bone density restoration can be considered a marker of disease control and successful therapy in children’ [1]. Various factors have been implicated: poor nutrition, inflammation (notably cytokines TNF-α, IL-1β, and IL-6), lack of physical activity, genetics, and drugs (i.e. steroids). These factors can act upon appetite/food intake, GH-IGF axis, and gonadal functions or at the level of the growing bone plate itself. Various methods have been used to improve growth and bone mass in children with IBD: a. exclusive enteral nutrition therapy or partial nutrition support; b. early immunosuppression; c. biologics; d. hormonal interventions; and e. surgical treatment. Although there are many studies on their beneficial effects, results are not consistent and are mostly unsatisfactory. In general, most important predictors for the successful treatment of linear growth impairment are the presence of growth failure at the onset of treatment, good control of inflammation preferably by achieving mucosal healing, and initiating the treatment in the early stages of puberty.

Reference(s)

O-22  
Partial enteral nutrition with a Crohn’s disease exclusion diet (CDED) is effective for induction of remission in children and young adults with mild to moderate Crohn’s disease  
R. Sigall Boneh*, T. Pfeffer-Gik, A. Levine, T. Zangen, M. Boaz, I. Segal. Wolfson Medical Center, Holon, Israel

Background: Exclusive enteral nutrition (EEN) is effective for inducing remission in active pediatric Crohn’s disease, while 50% Partial Enteral Nutrition (PEN) with free diet is ineffective, suggesting that the mechanism depends on exclusion of free diet.

Aims: Investigation of a standardized alternative diet based on PEN with exclusion of dietary components hypothesized to affect the microbiome or intestinal permeability.

Methods: Children and adults with active disease defined as a pediatric Crohn’s disease activity index (PCDAI) >7.5, or Harvey–Bradshaw index (HBI) ≥4, received a 6 week structured Crohn’s disease exclusion diet (CDED) that allowed access to specific foods and restricted exposure to all other foods, and 50% of calories from a polymeric formula. Remission, CRP and ESR were reevaluated at 6 weeks. The primary endpoint was remission at 6 weeks defined as PCDAI <7.5 in children, or HBI <3.

Results: We treated 47 patients (mean age 16.1±5.6 years, 34 children). Response and remission were obtained in 37 (78.7%) and 33 (70.2%) patients, respectively. Mean PCDAI decreased from 27.7±9.4 to 5.4±8 (p < 0.001), HBI from 6.4±2.7 to 1.8±2.9 (p < 0.001). Remission was obtained in 70% of children and 69% of adults. Normalization of previously elevated CRP occurred in 21/30 (70%) patients in remission. Seven patients used the CDED alone, 6/7 obtained remission.

Conclusions: Dietary therapy involving partial enteral nutrition with an exclusion diet appears to lead to high remission rates in early mild to moderate luminal Crohn’s disease in children and young adults.

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