conferenceseries.com

J Community Med Health Educ 2019, Volume 9
DOI: 10.4172/2161-0711-C3-060

Health, nutrition and intestinal microbiota

Ivana Haluskova Balter
French Society of Immunology, France

Microbiota under three years old fluctuates and is more impressionable to environmental factors than the adult microbiota. In lifestyle, nutrition plays one of key factors along with sanitization, caesarean sections, antibiotic usage and immunizations. There are several pediatric diseases associated with alterations of the intestinal microbiota like atopy and asthma, obesity, diabetes, inflammatory bowel diseases and neurodegenerative diseases and a raising scientific evidence concerning link between microbiota immune response and communicable-infectious and tropical diseases. Breastfeeding, introduction of solid food, regional lifestyle and diet (geographical variations) are factors influencing gut microbiota. Regardless of the origin of gut associated commensals, a number of studies have attempted to identify the mechanism by which breastfeeding promotes overall immune health *via* entero-mammary pathway. Early life changes in microbiota composition can alter susceptibility to developing obesity later in life. Many studies shown presence/absence of specific microbes can modulate and program life-long changes in immunity and further clinical study might help understand exact paths on metabolic disease progression. Research showed that impact of diet and environmental change stresses on the host can be passed on maternally to children through epigenetic modulation of the DNA by methylation. Thus, maternal dietary and microbial exposures are also crucial to the development of the microbiota early in life as children may inherit genes with differing potential for predisposition for malnutrition or obesity, based on the diet of their mother. A study showed that treatment of obese mice with Akkermansia muciniphila reduced high fat diet induced metabolic disorders, including fat mass gain, metabolic endotoxemia, adipose tissue inflammation and insulin resistance. By understanding the differing energy harvest and metabolic capabilities of each child's gut microbiota, there might be support for crafting microbiota-based interventions (supported already by preclinical data and research) to reverse susceptibility to obesity early in life and clinical data might support research evidence. Early life therapeutic approach and improved intestinal health might be accessible tool to combat obesity and malnutrition. There is a real need for cohort global clinical studies that survey the infant microbiome and metabolome from birth and during at least the first year of life. Full understanding of disease-related changes gathered could allow creating interventions that rationally shift the microbiota in infants to construct a healthy intestinal environment from a young age particularly which is particularly pertinent in emerging countries.

ivankahhaluskova@gmail.com

Notes: