

Probiotics and Intestinal Infection

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Short Communication

One of the hottest topics in the 21st century is “probiotics”. Although probiotics are now world wide spread and many papers, research and studies are performed about it, but still it is not completely explored, researches are done to test it in every communicable and non-communicable disease and still going on [1]. The field of paediatric gastroenterology and especially intestinal infection is the interest of most pediatricians. Probiotic as a definition “which changed over the years” is: a “live micro-organisms which, when administered in adequate amounts, confer a health benefit on the host” [2]. Probiotics are viable microbial dietary supplement. They are living micro-organisms used as food additives having a beneficial effect on the host by improving digestion and intestinal hygiene [3,4]. There are many function and characteristic in probiotics, but its use in gastrointestinal diseases is unique.

Recognition of the immunomodulatory roles of probiotic bacteria is now promoting opportunities for use of these microorganisms in many fields in gastrointestinal infections. The survival issues of probiotics are associated with their establishment in the competitive gut ecosystem. The use of probiotics may induce a ‘barrier’ influence against common pathogens and antigens by activating macrophages, altering cytokines, increasing natural killer cell activity, and/or increasing levels of immunoglobulins. Since the generation of immunophysiological regulation in the gut which depends on the establishment of indigenous microflora and on the therapeutic interventions based on the consumption of cultures of beneficial live microorganisms that act as probiotics. One of possible mechanisms of probiotics is promotion of a non-immunologic gut defence barrier, which includes the normalization of increased intestinal permeability (dysbiosis) and gut micro ecology [5]. The role and effect of probiotics in infant feeding, on the mucosal permeability & microbial flora composition and in turn on the stabilization of Th1/Th2 & IgE production has been tested.

Another possible mechanism of probiotics is improvement of the intestine’s immunologic barrier, particularly through intestinal immunoglobulin, alleviation of intestinal inflammatory reaction

that promote a gut-stabilizing effect. Many probiotics effects are mediated through immune regulation, particularly through balance control of proinflammatory and anti-inflammatory cytokines [6]. So, probiotics can be used as innovative tools to alleviate intestinal inflammation, normalize gut mucosal dysfunction, and down-regulate hypersensitivity reactions. There are differences that exist in the immunomodulatory effects of candidate probiotics bacteria [7]. Specific immunomodulatory properties of Probiotics bacteria should be characterized when developing clinical applications for extended target populations. Probiotics as a conclusion are a therapeutic class being increasingly used for a variety of GI disorders. Probiotics appear to alter intestinal microflora and may exert their effects by a variety of mechanisms. Many species of probiotics exist and it is generally accepted that all probiotics are not created equal. Efficacy may be due to a single strain or multiple strains or a combination of different probiotics. Probiotics do not provide additional benefit compared with standard therapy alone.

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