عنوان مقاله:

Dysbiosis and the Chemopreventive Role of Prebiotics in Colorectal Cancer

محل انتشار:

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خلاصه مقاله:

Recent metagenomic evidence broadly supports the association and causality of gut dysbiosis with the development of colorectal cancer (CRC). Probiotics and prebiotics have been proposed as new preventive and therapeutic adjuncts for CRC management. While promoting the growth of ingested probiotics, an ideal prebiotic fibre should reach the colon intact to be fermented by a distinct group of beneficial commensal bacteria. Therefore, the selection of probiotic bacteria, the growth-promoting prebiotic fibre, and a combination of both probiotics and prebiotics (known as synbiotics) are critical in preventing carcinogenesis. Despite limited clinically measurable data, findings from preclinical animal studies have recognized the functional role of synbiotics of varying genera, strains, and doses in nourishing beneficial human gut microbiome to evade cancer. Nevertheless, translating such heterogeneous-based data from different study settings and measured outcomes into evidence-based recommendations is a very

challenging task. The emerging concept is that an ideal synbiotic combination may effectively modify the intestinal microflora composition which helps imprint the immune systems for lasting chemoprevention effect. The present article reviews the roles of gut microflora in colorectal carcinogenesis followed by discussing the updated evidence of prebiotic chemoprotective effects in modulating gut microflora and host immunity against CRC. Besides, it also summarized the limitations of the clinical use of probiotics and prebiotics to achieve synergism in formulating ideal .synbiotics

کلمات کلیدی:

colorectal cancer, Dysbiosis, Microbiota, Prebiotics, probiotics, Synbiotics