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Effect of Probiotics and Prebiotics on Gut Integrity in Critically Ill Patients

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Gut failure is common in ICU patients which characterized by lack of bowel sounds, regurgitation, vomiting, high gastric residual volumes (>500 mL/day), diarrhea, constipation, abdominal distension or GI bleeding. During critical illness, several factors might affect gut microflora that involve changes in stress hormones, gut ischemia, use of antibiotics and immune suppression, gut micrbiota, lack of nutrients and enteral feeding failure. Unfortunately, clinical evaluation of the gut function is difficult therefore gut dysfunction usually goes unrecognized related to poor clinical outcomes and high morbidity and mortality rate. Diet has the strongest effects on gut microbial colonization that could modify the profile of dominant species in human gut and offer different consequences of health. Recent data suggested to preserve or reestablish a healthy gut microbiota during and after critical diseases through targeted interventions such as probiotics, prebiotics, fecal microbial transplants (FMT), and synthetic 'stool pills'. This review developed to evaluate the efficacy of probiotic/prebiotics in critical ill patients. Probiotics offers many benefits to the host including effective in the treatment or prevention of acute gastroenteritis, GI dysfunctions, antibiotic associated diarrhea (AAD), certain pediatric allergic disorders, necrotizing enterocolitis and inflammatory bowel disease (IBD). Briefly, probiotics use in the ICU remains widespread and no definitive recommendation for the routinely probiotics use in critical ill patients. Further studies are required to define the dose, types and safety of pro- and prebiotics in critically illness.

Keywords: Probiotics, prebiotics, critically ill patients, Antibiotic associated diarrhea, Clostridium difficile-associated diarrhea, Ventilator-associated pneumonia.

Biography:

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