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Human microflora, Probiotics and Wound healing

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Abstract

Immediately after wounding, microbial colonization occurs. The effects of microbial wound colonization on healing process are particularly important and therefore, based on the significant economic and social impact of wounds, a higher level of attention and research are needed to evaluate the microbial effects on wound-healing ability and the potential new therapeutic agents that can regulate the cross-talk between microflora, pathogens and the innate immune response, and lead to wound healing acceleration. This article reviews the recent literature on the effect of human microflora, both cutaneous and gastrointestinal, on wound healing process. In addition, the latest advancements in the use of the normal microflora members that are beneficial to the host, the so-called probiotics, as a new therapeutic agent in wound management are presented and analyzed. A better understanding of the influence of microflora on wound healing, may lead to therapeutics that improve the wound management and resolve impaired wounds.

Keywords

Human microflora, Probiotics, Lactobacillus, Wound, Wound healing

1. Introduction

The majority of epithelial linings of the human body are colonized by a great number of microorganisms, approximately 10^{14} microbial cells, which outnumber about ten times the human body cells. These microbes constitute the so called normal microflora and the transient microbial flora. These microorganisms do not