Antibacterial Potential of Brazilian Green Propolis in Periodontitis Treatment

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Periodontitis is an infection that affects the tissues that surround the teeth, causing gingival inflammation and can lead to bone loss, being caused mainly by the bacteria Prevotella nigrescens, Peptostreptococcus anaerobius, Actinomyces viscosus, Porphyromonas asaccharolytica and Fusobacterium nucleatum. Through the increase in bacterial resistance and the problems that this disease causes in the general population, the efficacy of Brazilian green propolis has been studied, a resinous or serous substance produced from shoots, flowers and different vegetable exudate. Therefore, the aim of this study was to evaluate the antibacterial activity of the crude hydro alcoholic extract of Brazilian green propolis (HEBGP) in the face of the main bacteria causing periodontitis. The determination of the antibacterial activity of HEBGP was performed by the technique of Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC). The bacteria evaluated were: Prevotella nigrescens (ATCC 33563), Peptostreptococcus anaerobius (ATCC 27337), Prevotella oralis (ATCC 33269), Actinomyces viscosus (ATCC 43146), Porphyromonas asaccharolytica (ATCC 25260) e Fusobacterium nucleatum (ATCC 25586). The HEBGP concentrations used in these studies were 0.195 to 400 ug/mL. The MIC and MBC values for HEBGP ranged from 25 to >400 ug/mL, with bactericidal action against the Peptostreptococcus anaerobius (MIC and MBC: 25 µg/mL) and Fusobacterium nucleatum (CIM and MBC: 400 µg/mL) and bacteriostatic for Prevotella nigrescens and Prevotella oralis (MIC: 200 ug/mL and MBC: 400 ug/mL). Thus, HEBGP demonstrated antibacterial action in treatment of periodontal pathogenic bacteria, suggesting that it is a promising product as a therapeutic alternative to combat periodontal diseases.

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