THE RAT AND THE SHEEP, ANIMAL MODELS FOR THE STUDY OF PERIODONTITIS AND INDUCED PERIIMPLANTITIS OF BACTERIAL STRAINS SPECIFIC TO HUMAN ORAL MICROBIOTE

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Abstract

Periodontitis and periimplantitis are two diseases that have as a common element the progressive loss of alveolar bone, eventually leading to the loss of teeth and dental implants. The causes of the two diseases are multiple but the composition of the local bacterial biofilm is one of the important triggers. The aim of this review was to establish the main bacterial strains that can induce experimental periimplantitis and periodontitis as well as the techniques by which diseases can reproduce. The rat and the sheep are commonly used animal models in this branch of research because it reflects the main characteristics of human periodontitis or periimplantitis. The results obtained from the recent literature show that *Porfiromonas gingivalis, Aggregatibacter actinomicemcomitans, Streptococcus oralis* or *Fusobacterium nucleatum* (bacterial species commonly found in the human oral microbiota) are among the bacteria that can easily reproduce the two diseases of the oral cavity. Induction techniques include oral gavage, ligation technique, lipopolysaccharide injection, or the use of preinfected implant devices. The data accumulated in this review will be useful for research on the pathology of periodontal or periimplant diseases but also the approach of innovative therapies.

Key words: periodontitis, periimplantitis, rat, sheep, bacterial biofilm.