

題名:Cell Permeability of Guided Tissue Regeneration Membranes in vitro

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摘要:The use of membranes for periodontal regeneration is well established. In clinical use, the exposure of membranes to the oral microflora may result in a pathway for periodontal infections. An important role in this process is played by *Porphyromonas gingivalis*. The purpose of the present study was to examine the colonization of 6 different bioresorbable and nonresorbable membranes for periodontal regeneration by the strain DSM 20709 of *P. gingivalis* and to determine the time needed by this microorganism to pass through the membranes. A device consisting of a tube sealed with the membranes and filled with a medium suitable for the growth of *P. gingivalis* was incubated in a bigger tube containing the same medium to study the process of colonization and the crossing of membranes. The outer tube was inoculated with  $10^4$  cells of *P. gingivalis* DSM 20709. The passage of bacteria through the membranes was monitored at 6, 24, and 48 hours by counting the number of cells in the inner tube. The colonized membranes were observed using a scanning electron microscope. Differences in the behavior of the 6 membranes analyzed were demonstrated.