Inflammatoric mediators in periapical bone lesion

Abstrak

The cytokines affecting periapical bone lesion have been reviewed for current understanding of the mechanisms and mediators involved. Periapical bone lesions can result from dental disease that spreads into the root canal and expands to the surrounding periapical tissue. This will create periradicular tissue inflammation, where cells like monocytes, PMNs and lymphocytes regulate and are regulated by cytokines responsible for inflammation. Periapical bone resorption can be caused by inflammation, by cytokines including IL-1, MMP-8, GM-CSF. Measuring of level MMP-8s from root-canal exudates during endodontic treatment could be used as a biochemical indicator of the inflammatory status of the periapical tissue. In addition, various cytokines such as TGF-B1, IL-6, IL-10 promote bone proliferation. The variance in cytokine receptor expressions may explain the selective recruitment in the infiltration of inflammatory cells at the local inflammation site. Cytokines, each having their own duty, are key mediators of periapical bone resorption that still needs to be investigated in detail.