Activation of RANKL-induced osteoclasts and memory T lymphocytes by Porphyromonas gingivalis is serotype dependant

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Aim Destructive periodontitis is associated with a Th1-Th17 immune response and activation of RANKL-induced osteoclasts. In addition, Porphyromonas gingivalis K1 and K2 serotypes induce a strong Th1-Th17 response. This study aimed to investigate whether these P. gingivalis serotypes induce higher osteoclasts activation, by increased Th17-Associated RANKL production, and an antigen-specific memory T-lymphocyte response. Material and Methods The RANKL production and TRAP+ osteoclast induction were quantified on naïve T lymphocytes stimulated with dendritic cells primed with the P. gingivalis serotypes. The T-bet, GATA-3, RORC2 and Foxp3 expression was correlated with RANKL production. The frequency of proliferating memory T lymphocytes in response to P. gingivalis serotypes was determined in both periodontitis and healthy subjects. Results T lymphocytes stimulated by K1 or K2-primed dendritic cells elicited higher levels of RANKL and TRAP+ osteoclasts than cells stimulated with the other