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Salivary cytokines and levels in denture stomatitis: An exploratory case-control study

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ABSTRACT

We aimed to evaluate the microbial and inflammatory characteristics associated with Denture Stomatitis (DS) analyzing: 1) Levels of salivary cytokines and cultivable *C. albicans*; 2) DNA-DNA checkerboard on biofilm associated with mucosal tissue-bearing denture surfaces, 3) Serum C-reactive protein (CRP) levels. Thirty-two subjects were enrolled in the study with control (n = 17) and DS types II and III (n = 15) subjects. Samples were collected from unstimulated whole saliva, serum and swabs from denture surfaces. Salivary levels of inflammatory mediators and CRP were measured by multiplex. Samples from denture and mucosal surfaces were analyzed by DNA-DNA checkerboard. Saliva from DS subjects showed increase in IL-8 (p = 0.04) and IL-1 β (p = 0.04) with trend for increase in IL-1 β , TNF α and IL-6 levels. *C. albicans* higher counts in DS saliva (p = 0.03) showed association with elevated levels of IL-8 (p = 0.03) and IL-1 α (p = 0.01). CRP levels were not different among groups (p = 0.74). DNA-DNA checkerboard analyses indicated typical periodontal pathogens below the detection threshold of 104 organisms on both denture and inflamed mucosal surfaces. The data suggest that DS is associated with elevation of salivary IL1 and IL-8 together with increased *C. albicans*. There was no evidence of systemic inflammation as measured by serum C-reactive protein levels.

KEYWORDS

Cytokines; Serum C-Reactive Protein; Denture; *C. albicans*; Stomatitis; Salivary

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