

Salivary Inflammatory Mediators in Patients with Intraoral Lesions Versus Controls

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Objectives: The presence of specific salivary biomarkers may aid with diagnosis of oral disease. Few studies have investigated the potential of C-Reactive Protein (CRP), a marker of acute phase inflammation, as a salivary analyte. This study aims to compare the presence of salivary CRP in patients with inflammatory intraoral lesions (cases) versus healthy subjects (controls).

Methods: Case subjects had ≥ 1 intraoral lesion producing inflammation of the surrounding tissues, while controls had no clinical signs of intraoral inflammation. Saliva samples were collected from 25 cases and 25 age- and sex-matched controls via passive expectoration. Lesion characteristics were recorded, and saliva samples underwent ELISA to determine CRP presence.

Results: Salivary CRP was detected in 17 subjects (68%) with inflammatory lesions and 8 subjects (32%) without lesions and was significantly associated with the presence of intraoral inflammatory lesions (Chi-square, $p=.011$). 88.9% ($n=8/9$) of subjects with aphthous ulcerations, 61.5% lichen planus ($n=8/13$), and 33.3% atrophic fungal infection ($n=1/3$) exhibited the presence of salivary CRP, though there were no significant differences in CRP presence by lesion diagnosis ($p=NS$, Chi-square). In subjects with intraoral lesions, CRP was detected in a significantly greater number of subjects with acute (80%, $n=8/10$), compared to chronic (40%, $n=6/15$), inflammatory lesions ($p=.028$, Fisher exact).

Conclusions: Our results reveal that salivary CRP is present at sufficiently high levels to be detected using ELISA and that elevated salivary CRP levels can be detected in patients suffering with intraoral inflammatory conditions. This has implications for the diagnosis, monitoring, and risk assessment of disease.