

## Profil dan konsentrasi total protein saliva perokok dewasa muda dan keterkaitannya dengan karies = Profiles and total of salivary protein concentration in young adult smokers and their correlation with dental caries

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### Abstrak

Latar Belakang: Saliva merupakan cairan biologis yang kompleks pada rongga mulut yang mengandung berbagai komponen, salah satunya protein. Protein pada saliva merupakan salah satu sistem pertahanan yang dapat berperan melindungi rongga mulut dari penyakit.

Tujuan: Menganalisis perbedaan profil protein dan konsentrasi total protein saliva perokok dan non-perokok serta kaitannya dengan karies.

Metode: Penelitian melibatkan kelompok perokok n=25 dan kontrol (non perokok) n=25. Konsentrasi total protein saliva diuji dengan metode Bradford serta profil protein saliva diperoleh dengan menggunakan metode SDS PAGE. Karies diukur dengan score indeks DMF-T melalui pemeriksaan klinis.

Hasil: Terdapat protein saliva dominan yang ditemukan pada subjek perokok dengan berat molekul 11.6 kDa dan 54.5 kDa dan subjek non-perokok dengan berat molekul 27 kDa, 60 kDa, 94.5 kDa. Konsentrasi total protein saliva subjek perokok sebesar 551.486 µg/mL lebih rendah dibandingkan non perokok yaitu sebesar 765.361 µg/mL dengan perbedaan statistik tidak signifikan.

Kesimpulan: Terdapat perbedaan profil protein saliva perokok dan non perokok, namun tidak terdapat perbedaan yang signifikan pada konsentrasi total protein saliva antara kelompok perokok dan non perokok. Terdapat korelasi negatif lemah antara profil dan total protein dengan skor indeks DMF-T.

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Background: Saliva is a complex biological fluid in the oral cavity that contains various components, one of them is protein. Protein in saliva is one of the defense systems that can protect the oral cavity from disease.

Objective: To analyze the difference of salivary protein's profile and total concentration in smokers and non-smokers (control) and their correlation with dental caries that measured by DMF-T index scores.

Methods: Study consisted of two group, smokers group (n=25) and non-smokers as healthy control (n=25). Salivary protein total determined with Bradford method and the salivary protein profile determined with SDS-PAGE method. Caries was assessed by the DMF-T index scores through clinical examination.

Result: The dominant salivary proteins profile were found in smokers subject with molecular mass 11.6 kDa and 54.5 kDa and those found in non-smokers subject with molecular mass 27 kDa, 60 kDa, and 94.5 kDa. The total salivary protein concentration of smokers subject are 551.486 µg/mL lower than non-smokers

subject, which is 765.361 $\mu$ g/mL) but the difference was not statistically significant ( $P>0.05$ ).

Conclusion: There are differences found in salivary protein profile between smokers and non-smokers subject. However, there is no significant difference in salivary protein total between smokers and non smokers. There are negative correlation between the salivary protein`s total and the scores of DMF-T index.