

## Deteksi Profil Protein Saliva sebagai Biomarker Potensial pada Anak Status Stunting di Nusa Tenggara Timur = Detection of Salivary Protein Profile as a Potential Biomarker Children with Stunting in East Nusa Tenggara

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### Abstrak

Latar Belakang: Stunting menjadi permasalahan yang tinggi di Indonesia dengan prevalensi paling tinggi berada di NTT. Kondisi tersebut sering dikaitkan dengan kondisi oral, seperti penurunan level protein saliva. Namun, belum diketahui hubungan antara protein saliva dengan status HAZ yaitu stunting dan nonstunting. Tujuan: Membandingkan dan melihat hubungan total protein dan profil protein yang terdeteksi pada saliva anak dengan status HAZ.

Metode: Bahan biologis tersimpan sampel saliva didapatkan dari 96 anak di NTT. Sampel diuji menggunakan Bradford assay dan SDS PAGE untuk melihat total protein dan profil protein. Hasil dianalisa dengan SPSS.

Hasil: Tidak terdapat perbedaan bermakna antara total protein dengan status HAZ. Didapatkan korelasi negatif sangat lemah ( $r=-0.32$ ,  $p=0.756$ ) pada total protein dengan status HAZ. Profil protein yang diduga terdeteksi yaitu protein serum albumin, amilase, acidic PRPs dan cystatin. Protein serum albumin dan acidic PRPs persentasenya terhitung lebih banyak pada nonstunting. Tidak terdapat perbedaan bermakna antara pola profil protein yang terdeteksi dengan status HAZ. Didapatkan korelasi positif sangat lemah ( $r=0.080$ ,  $p=0.381$ ) antara pola profil protein yang terdeteksi dengan status HAZ.

Kesimpulan: Total protein pada saliva tidak dapat dijadikan biomarker, protein yang diduga sebagai serum albumin dan acidic PRPs dapat dijadikan biomarker status HAZ pada anak, namun diperlukan pemeriksaan tambahan.

.....Background: Stunting is a high problem in Indonesia with the highest prevalence in NTT. These conditions have an impact on oral conditions, such as decreased salivary protein levels. There is no known relationship between salivary protein and HAZ status, namely stunting and nonstunting.

Objective: To observe and compare the relationship between total protein and suspected protein profile in children salivary with HAZ status.

Methods: Biological stored saliva samples were obtained from 96 children in NTT. Samples were tested using Bradford assay and SDS PAGE and analyzed with SPSS.

Results: There was no significant difference between total protein and HAZ status. A very weak negative correlation was found ( $r=-0.32$ ,  $p=0.756$ ) in total protein with HAZ status. The suspected protein profiles were serum albumin, amylase, acid PRPs, and cystatin. Serum albumin and acid PRPs accounted for higher percentages in nonstunting. There was no significant difference between the protein profile pattern and HAZ status. A very weak positive correlation was found ( $r=0.080$ ,  $p=0.381$ ) between pattern profile protein and HAZ status.

Conclusion: Total protein in saliva cannot be used as a biomarker, proteins suspected of being serum albumin and acidic PRPs can be used as biomarkers of HAZ status in children, but additional tests are needed.