Kadar fosfat dalam unstimulated saliva pada pasien diabetes melitus tipe 2 = Phosphate concentration in unstimulated saliva of type 2 diabetes mellitus patients

Johan Adiyasa, author

Abstrak

Latar belakang: Penderita diabetes melitus tipe 2 memiliki risiko yang lebih tinggi untuk mengalami karies gigi. Fosfat memegang peranan utama dalam kapasitas buffer unstimulated saliva sehingga kadar fosfat berhubungan dengan faktor risiko karies individu. Kondisi ketosis dan hiperparatiroidisme yang menyertai diabetes melitus tipe 2 dapat menyebabkan penurunan buffer fosfat tubuh yang kemudian menurunkan kadar fosfat dalam unstimulated saliva.
Tujuan: Menganalisis kadar fosfat dalam unstimulated saliva pada pasien diabetes melitus tipe 2.
Metode: Unstimulated saliva 15 subjek diabetes melitus tipe 2 dan 15 subjek non diabetes melitus dikumpulkan untuk kemudian diukur kadar fosfatnya dengan metode phosphomolydate pada alat UV-Vis Spectrophotometer.
Hasil: Terdapat perbedaan kadar fosfat yang bermakna ($p < 0,05$) antara subjek uji dan subjek kontrol.
Kesimpulan: Kadar fosfat dalam unstimulated saliva pada pasien diabetes melitus tipe 2 (0,27 ± 0,05 mmol/L) lebih rendah jika dibandingkan dengan individu non diabetes melitus (2,16 ± 0,22 mmol/L) yang mana berdasarkan analisis statistik, hal tersebut berbeda bermakna secara signifikan.
.....Background: Type 2 diabetes mellitus patients have a higher risk to suffer from dental caries. Phosphate plays a primary role in buffer capacity of unstimulated saliva so that phosphate concentration is associated with individual caries risk factors. Ketosis and Hyperparathyroidism conditions that come within type 2 Diabetes Mellitus could decrease the phosphate buffer in the body which then will decrease the phosphate concentration in unstimulated saliva.
Objective: To analyze the phosphate concentration in unstimulated saliva of type 2 diabetes mellitus patients.
Method: Unstimulated saliva of 15 type 2 diabetes mellitus subjects and 15 non-diabetic subjects were collected and then the concentration of phosphate was measured by the phosphomolydate method on UV-Vis Spectrophotometer instrument.
Result: There were significant differences in the phosphate concentration ($p <0.05$) between test subjects and control subjects.
Conclusion: The phosphate concentration in unstimulated saliva of type 2 diabetes mellitus patients (0.27 ± 0.05 mmol / L) is lower than individuals without diabetes mellitus (2.16 ± 0.22 mmol / L), which is significantly different by statistical analysis.