

INTISARI

Saliva merupakan suatu cairan yang sangat penting di dalam rongga mulut, yang memiliki fungsi mastikasi, juga membantu proses penelanan. Keadaan buffer saliva merupakan faktor penting yang berperan dalam rongga mulut karena keadaan rongga mulut yang baik adalah yang memiliki keadaan pH normal yaitu memiliki nilai berkisar 5,6-7,0. Usaha pengendalian kesehatan gigi dan mulut termasuk saliva dapat dilakukan dengan melakukan tindakan pencegahan salah satunya dengan diet konsumsi gula. Diet yang dianjurkan adalah makan makanan mengandung cukup protein dan fosfat yang dapat menambah sifat basa saliva. Xylitol merupakan bahan pengganti gula yang sering digunakan. Xylitol dapat dijumpai dalam bentuk larutan kumur, permen karet dan tablet hisap yang di dalamnya terkandung xylitol yang mempunyai efek menstimulasi daya alir saliva.

Penelitian ini merupakan eksperimental klinis atau uji klinis yaitu penelitian eksperimental terencana yang dilakukan pada manusia, dengan rancangan penelitian *pre-post test control group design*. Jumlah sampel dalam penelitian ini berjumlah 22 orang dibagi menjadi 4 kelompok. Kelompok 1, 2, dan 3 berkumur dengan larutan xylitol konsentrasi 25% (50 mg), 50% (100 mg) dan 100% (200 mg), kelompok 4 mengunyah permen karet xylitol. Analisis data untuk mengetahui perbedaan pH saliva dan pH plak antar kelompok penelitian menggunakan Anova yang dilanjutkan dengan LSD (*Least Significance Different*), sedangkan untuk mengetahui perbedaan pH saliva dan pH plak sebelum dan sesudah perlakuan menggunakan uji t berpasangan (*paired sample t test*).

Hasil analisis dengan uji Anova didapatkan perbedaan signifikan pH saliva dan pH plak diantara 4 kelompok penelitian dengan nilai p sebesar 0,041 pada pH saliva dan 0,002 pada pH Plak. Hasil uji LSD didapatkan perbedaan pH saliva antara permen karet Xylitol dibandingkan Xylitol 100%, tidak terdapat perbedaan pH saliva antara permen karet Xylitol dibandingkan Xylitol 25%, maupun Xylitol 50%. Namun terdapat perbedaan pH plak antara permen karet Xylitol dibandingkan Xylitol 50% maupun Xylitol 100%. Terdapat perbedaan pH plak antara Xylitol 25%, Xylitol 50% maupun Xylitol 100%. Hasil analisis dengan uji *paired sample t test* didapatkan perbedaan signifikan sebelum dan sesudah mengunyah permen karet xylitol.

Kata Kunci : Xylitol, pH saliva, pH plak, Buffer

ABSTRACT

Saliva is one of the important liquid in the mouth cavity, that had a function for mastication, it also helps in swallowing process. Saliva buffer states is an important factor that whose role in the mouth cavity because a good mouth cavity which has a normal state of pH that has a value range from 5,6-7,0. This saliva state affects the tooth and mouth health. The effort to control tooth and mouth cavity including saliva can be done with running preventions, one of it is with sugar diet. Diet that is recommended is eating foods that contain enough protein and phosphate that can add saliva alkaline nature. Using a replacement ingredient is one of the sugar diet efforts. Xylitol is a sugar replacement that often used. Xylitol can be found in form of mouth wash solution, bubble gum and lozenges that contain xylitol that has an effect to stimulate saliva flowability.

This is a clinical experimental or clinical test that is a planned experimental research that is done in human, using a pre-post test control group design. The number of sample is 22 people which are divided into 4 groups. Group 1, 2 and 3 gargling using 25% of xylitol solution concentration (50 mg), 50% (100 mg) and 100% (200 mg), the fourth group chewing xylitol bubblegum. The data analysis are done to determine the difference of saliva pH and pH plaque between each research group using Anova that continued with LSD (Least Significance Different), while to determine the difference of saliva pH and plaque pH before and after the treatment it use a paired t test (paired sample t test).

The result of analysis using Anova test obtained that there are significant difference of saliva pH and plaque pH between 4 study groups with p value of 0,041 in saliva pH and 0,002 in plaque pH. The result of LSD test obtained a difference of saliva pH between xylitol bubblegum compare than xylitol 100%, there are no difference of saliva pH between xylitol bubblegum compare than xylitol 25%, as well as the xylitol 50%. There are differences in plaque pH between xylitol bubblegum compare than xylitol 50% as well as 100% xylitol. There are no differences in plaque pH between xylitol bubblegum compare than xylitol 25%. There are differences of plaque pH between xylitol 25%, xylitol 50% and xylitol 100%. The analysis result using paired sample t test obtained that there are significant differences before and after chewing xylitol bubblegum.

Keyword : Buffer, pH plaque, pH saliva, xylitol