● 성인의 치태에 대한 lactate dehydrogenase의 활성 및 구강위생에 대한 aspartame 및 백설탕과 흑설탕의 미치는 효과에 관한 연구

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Aspartame 및 백설탕과 흑설탕을 이용하여 구강위생에 대한 효과 및 성인의 치태로 부터 lactate dehydrogenase 활성도를 40명의 치과대학 학생을 대상으로 하여 4군으로 나누어 연구하였다.

설탕은 하루에 16gm을 소모시켰으며 aspartame은 매일 80mg을 커피나 홍차에 넣어 마시게 했으며 이 외에도 하루에 3회 위의 용액으로 양치를 시켰다. 실험 전에 각각 기준치를 설정한 후에 각 기록을 1, 7, 14, 28일째 얻었다. 이 연구의 목적은 임상적인 치주 지수와 구강위생 상태를 평가하고 lactate dehydrogenase 활성도와 치은 질환과의 유의성을 평가하기 위함이다.

치아우식 활동도 검사에서 각 군간에 뚜렷한 유의성은 없었으나 aspartame군에서 비교적 낮은 활성도를 보였다. 임상적인 검사에서 치태 지수나 치은 열구 출혈지수는 각 군간에 유의성을 보여주지 않았으나 치은지수에서 7일째와 14일째 통계적 유의성이 나타났다. 특히 14일째 백설탕군과 aspartame군 사이에 유의한 차가 있었다. 그러나 이들 각 군간의 평균치는 서로 비슷한 결과를 보여주었다.

Lactate dehydrogenase활성도는 1일째에 상당히 높게 나타났으나 7일째에 현저히 저하되었으며 실험이 진행됨에 따라 점차 증가되는 추세를 보였다. 또한 설탕군과 비교군의 활성도가 aspartame군의 활성도에 비해 비교적 높은 수치를 보여주었으나 각 군간의 평균치에서 뚜렷한 유의성을 발견하지 못했다.

결론적으로 각 군으로 부터 얻어진 기록에서 설탕이나 aspartame이 구강위생상태에 영향을 끼친다는 뚜렷한 증거를 발견하지 못했다.

● 치주수술시 절개방법이 치주낭상피 제거에 미치는 영향에 관한 연구

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齒周手術시 절개방법이 齒牙炎症度, 部位 및 齒周囊 깊이에 따라 齒周囊上皮 제거에 미치는 영향을 연구하기 위하여 전남대학교 의과대학 부속병원 치주과에 내원한 齒周外科的 처치를 요하는 성인남녀 ⑴Ⅷ명을 선택하여 齒石除去術, 齒根平滑術 및 口腔衛生敎育을 시행한 다음 1주 경과 후 제1, 2소구치와 제1, 2대구치를 대상으로 正中頰舌部, 頰舌側 齒間乳頭部의 齒周囊 깊이와 Sulcus Bleeding Index를 기록하였으며, ENAP, modified ENAP 및 modified Widman flap procedure에 따른 scalloped internal bevel incision을 시행한 다음 正中頰滑部의 齒龈과 頰舌側 齒間乳頭部로부터 채취한 107개의 생검표본에 대하여 齒周囊上皮의 잔존정도를 조직학적으로 평가하여 다음과 같은 결론을 얻었다.

1. 세가지 절개방법 모두 齒周囊上皮를 완전히 제거하지는 못하였다.
2. ENAP에 따른 incision은 齒周囊上皮를 제거하기에 효과적이 아니었다.
3. modified Widman flap에 따른 incision은 齒周囊上皮 제거에 가장 효과적 이었으며 특히 齒間

Effects of replamineform hydroxyapatite on the regeneration of periodontal bone defect area

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This study was made in order to determine the histologic changes associated with periodontal ligament healing following the use of Replamineform Hydroxyapatite(RHA) in the bifurcation area of 1st molar where artificial periodontal defect had been created.

In this experiment, 5 adult mongrel dogs were used. RHA was implanted on the distal area of mesial root of 1st molar on the left maxillar and mandible. Right side of maxilla and mandible was nongrafted and routine periodontal flap operation was done. The dogs were sacrificed at 1st, 2nd, 3rd, 4th and 8th week after surgery. Thereafter histologic specimens were made by the usual methods and examined with light microscopy.

The results were as follows :

Overall healing process was comparatively rapid and favorable in the experimental areas. There was little difference in the degree of periodontal ligament healing between the 1st and 2nd week aspecimens. From the 3rd week specimen, distinct periodontal ligamnet with some thickness was formed and also some of new cementum formation was seen. In the 4th week specimen, bone regeneration was remarkable and regeneration of periodontal ligament was going on. In the 8th week specimen, as new bone was forming around the RHA, new alveolar crest was almost formed. New cementum was deposited along the entire root and even thickness of periodontal membrane was completely reformed. But through the entire procedure of the histologic observation, functional orientation of periodontal ligament was not ween and maxillary area showed some rapid and favorable healing process.

Effect of aspartame, white sugar and black sugar on oral hygiene and on lactate dehydrogenase activity in human dental plaque

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A study was carried out for the purpose of observing the effect of aspartame, black and white sugar on oral hyginene and on LDH activity in human dental plaque of forty dental students. Within the limits of this study, the results were as follows.

1. Significant differences in the gingival index between white sugar and aspartame groups on Day 14 were indicated by ANOVA test.
2. Clinical parameters of all group were gradually increased during the test period and did not show any difference among groups.
3. Caries activity and LDH activity were similar among groups, but LDH activity was markedly decrea-

sed on Day 7 and gradually increased in progress of time.

4. In conclusion, the data from each group did not show the evidence that the status of oral hygiene was affected by sugar & aspartame.

Effect of incision methods on removal of pocket epithelium in periodontal therapy

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This study was undertaken to evaluate the effect of the incision methods on the extent of removal of pocket epithelium in relation to degrees of gingival inflammation, sites and pocket depths.

Eighteen adult patients received scaling, root planing and oral hygiene instruction before periodontal surgery. Seven days after, Sulcus Bleeding Index and pocket depths were recorded at the mid-facial, mid-lingual and interproximal sites of premolars and molars, then the scalloped internal bevel incisions as described in the ENAP, modified ENAP and modified Widman flap procedure were performed.

One hundred and seven gingival biopsies were obtained from the mid-facial, mid-lingual and interproximal sites of the teeth and were evaluated the extent of residual pocket epithelium by light microscope with calibrated eyepiece.

The results were as follows :

1. None of the ENAP, modified ENAP and modified Widman flap incision could completely remove all pocket epithelium.
2. The ENAP incision did not effectively remove all pocket epithelium.
3. The modified Widman flap incision is more effective for pocket epithelium removal than the other procedures, especially in the interproximal regions.
4. Residual pocket epithelium was more frequently observed in interproximal regions than mid-facial and mid-lingual sites.
5. Frequency and amount of residual pocket epithelium appeared to be proportioned to the severity of inflammation and the depth of the pocket in all incision method applied.

Relationship between the diagnosis of the periodontal disease and alkaline phosphatase activity in human gingival fluid

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This study was undertaken to evaluate the relationship between the clinical indicies used in the diagnosis of the periodontal disease and the alkaline phosphatase activity in human gingival fluid.