

雄性白鼠 120마리를 다음과 같이 4群으로 나누어 實驗을 行하였다.

實驗 1群: 20마리로 構成되는 對照群.

實驗 2群: 20마리의 白鼠齒齦에 2% Formalin 용액을 0.5cc씩 주사.

實驗 3群: 40마리의 白鼠에 5% Alloxan 용액을 靜脈注射.

實驗 4群: 40마리의 白鼠에 Formalin 및 Alloxan 용액을 齒齦 및 靜脈에 注射.

實驗 3群과 4群에서 Alloxan을 1回 投與한 後 糖尿가 測定되지 않은 白鼠에는 Alloxan이 反復 注射되었다. 糖尿는 처음 7日間 每日 두번씩 測定되었으며 그 후는 10일 間隔으로 測定되었다. 모든 實驗動物은 實驗始作 후 40日만에 희생되었으며 糖尿病이 惹起된 白鼠의 齒周組織에서 다음과 같은 結論을 얻었다.

1. 糖尿病이 局所的 影響으로 發生된 齒齦炎症의 性狀 및 發生頻度에 何等影響을 미치지 못하였다.
2. 齒槽骨의 骨多孔症이 糖尿性白鼠에서 觀察되었다.
3. 糖尿性 白鼠에서 白堊質 및 齒周靱帶에는 病的變化가 없었다.

## ● Cortisone투여가 부신적출 백서의 치주조직에 미치는 영향에 관한 조직학적 연구

이 장 부

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著者は 副腎摘出 및 cortisone投與가 白鼠의 齒周組織에 미치는 影響을 觀察하기 爲하여 成熟한 雄性白鼠 50匹을 對象으로 이를 4群으로 나누어 實驗을 實施하였다. 即 ① 대조군(10匹) ② cortisone投與群(10匹) ③ 副腎摘出群(15匹) ④ 副腎摘出 後 cortisone投與群(15匹)

副腎摘出은 兩側性으로 實施하였고 cortisone投與는 每日 2mg式 30日間 皮下注射하였으며 實驗後 모든 白鼠의 下顎을 切取하여 이를 組織學的方法으로 觀察하여 다음과 같은 結論을 얻었다.

1. 副腎摘出群에서는 上皮附着部와 齒齦의 破壞를 볼 수 있었다.
2. 모든 實驗群은 對照群에 比하여 齒周靱帶의 膠原性纖維가 減少되었고 齒槽骨의 骨組鬆症을 볼 수 있었으며 特히 副腎摘出群에서 顯著하였다.
3. 副腎摘出群과 cortisone投與群에서는 破骨細胞의 活性도가 顯著히 增加되었으나 副腎摘出 後 cortisone投與群에서는 단지 造骨細胞의 活性도가 停止된 像만을 나타내었다.
4. 副腎摘出 後 cortisone投與群과 cortisone投與群에서는 齒周靱帶에서 細胞成分이 增加된 像을 보여주었다.

## ● Human Dental Plaque의 화학성분 함량분석에 관한 연구

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Dental plaque의 유기 및 무기질의 함량을 분석하기 위해 3일간 칫솔질을 하지 않은 6명의 성인

## The histological study of the periodontium in alloxan diabetic rats

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A histologic study conducted in 120 rats to study the effect of experimentally induced diabetes mellitus upon the periodontal tissues. A total of 120 rats were divided into four groups. The urine sugar levels determined using Testape.

Fourteen rats of 80 animals which were given alloxan presented no glycosuria, even though they were given alloxan in several times.

Twenty-six rats of the remaining 66 animals present a diabetic state for 40 days and 36 rats died with acute diabetes on an average 9 days following injection. Four rats returned to zero or one plus of urine sugar level.

The mandible, maxilla and pancreas were removed at the time of sacrifice.

The following conclusions regarding the periodontal tissues of rats with experimentally induced diabetic state were established by the microscopic finding.

1. Diabetes mellitus did not alter the nature and incidence of the gingival inflammation induced by local influence or irritation.
2. The varying degrees of the osteoporotic changes of alveolar bone were observed in diabetic animals.
3. No remarkable pathologic changes in the periodontal ligament and cementum were found in the diabetic animals.

## Effect of cortisone on the periodontium of the adrenalectomized rats

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The purpose of this study was to investigate the effects of cortisone in periodontium the adrenalectomized rats.

Experiments were carried out on 50 male, healthy albino rats. These animals were divided into 4 groups, as control, cortisone injection, adrenalectomy, and adrenalectomy plus cortisone injection group.

Groups II and IV received daily 2mg cortisone acetate. The animals were sacrificed after thirty days. Hematoxylin-Eosin and periodic Acid Schiff Stains were used for the investigation of tissue changes. The results obtained were summarized as follows :

1. The destruction of epithelial attachment and gingiva was observed in adrenalectomized group.
2. All experimental groups showed a decrease in the number of collagenous fibers of periodontal ligament and osteoporosis of alveolar bone compared with control group, especially the adrenalectomized group was severe.

3. A marked increase of osteoclastic activity was observed in the adrenalectomized and cortisone injected group, while the adrenalectomized plus cortisone injected group showed only ceased osteoblastic activity.
4. The adrenalectomized plus cortisone injected group and cortisone group showed an increased cellular elements of periodontal ligament.

## The study on the chemical compositions of human dental plaque

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The author has analyzed on the organic and inorganic contents of human plaque which was collected from six adult persons with the following results.

1. In organic contents, 11.0mg of carbohydrate, 5.45mg of protein and 5.90mg of nitrogen were shown from a total dried weight of 110mg plaque.
2. In inorganic contents, 0.82mg of Ca, 1.88mg of K and 1.45mg of inorganic phosphate 20mg are obtained from total dried weight of 110mg plaque. the Ca/P weight ratio which shows 0.3 was markedly low comparing other report.

## Comparison of root surface roughness after use of ultrasonic instruments

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Since ultrasonic instrument applicated to clinical periodontics, there have been a number of clinical reports on the effectiveness of Ultrasonics.

The purpose of this study was to compare the roughness of root surfaces following subgingival root planing with various instruments.

One hundred extracted human teeth were used in this study, and divided into five groups, and instrumented as follows.

Group I : Use of cavitron only

Group II : Use of files only

Group III : Use of curettes only

Group IV : Use of cavitron and curettes(cavitron followed by curettes)

Group V : use of files and curettes(files followed by curettes)

The following results were obtained.

1. Subgingival root planing with curettes only resulted in significantly smoother root surfaces than root planing with cavitron or files only.