

● 측방판막술시 수중약물이 치은 재부착 촉진에 대한 실험적 연구

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임상적으로 많이 나타나는 국소적 치은 퇴축부를 수복하기 위해 치은 측방 재부착 판막술이 시행되어 왔으나 저자는 재부착을 돕기 위하여 치근 표면에 탈지방제 및 탈회제를 도포하여 신생백아질, 골조직의 형성촉진 효과와 치은의 조기 재부착에 대하여 관찰하였다. 실험재료와 방법은 10-20kg 무게의 성견 8마리를 택하여 4군(1주군, 2주군, 3주군, 4주군)으로 나누어 인위적인 치주염 유발을 위해 Nembutal Sodium(30mg/kg, body weigh L.V.)으로 전신 마취를 하고 상·하악 견치를 시술부위로 정하였다.

시술부위의 순면측 치근에 기준점으로 흠을 형성하고 이 순측 치은을 5×8mm의 크기로 절제한 후 날카로운 치젤로 치조골을 절취해 내고 커즈로 치경부를 묶은 후 치조골 정상에서 봉합하였다.

이들 동물은 시술후 약 4주간 치주염 유무를 관찰하였고, 그후 치주염이 유발된 실험동물을 다시 전신마취 후 치아를 세척하여 육안적으로 기준점과 치은변연간의 거리를 측정하였으며 변성된 백아질을 #12 Gracey curette로 제거하고 각각 치아의 치은에 닿지 않도록 1:1 chloroform-methanol+citric acid(pH=1), 1:1 chloroform-methanol+0.6N HCl, citric acid(pH=1)를 각각 2분간 도포한 후 생리식염수로 세척하여 골막을 포함한 치은 측방 재부착 판막술을 시행하였다.

실험 1, 2, 3, 4주 후에 재부착된 치은변연과 기준점과의 거리를 측정하여 치은 퇴축부의 재부착 정도를 육안적으로 측정하고 각군을 회생시켜 10% neutral buffered formalin에 고정한 후 5% trichloroacetic acid에 탈회하고 다시 탈수시켜 celloidin에 포매하여 HE(hematoxylin and eosin)중 염색을 하고 광학현미경으로 관찰하였던 바 다음과 같은 결과를 얻었다.

1. 치은 측방 재부착 판막술 시술후 4주군에 있어서 노출치근의 치은 재부착 정도를 육안적으로 측정하였던바 대조군에서는 2mm정도, chloroform-methanol(이하 C.M.)+0.6N HCl 도포군에서는 3mm정도 C.M.+citric acid 도포군에서는 1mm 정도, citric acid 도포군에서 2mm정도 각각 치은 퇴축을 관찰할 수 있었다.
2. 상피의 전이정도는 C.M.+citric acid 도포군과 citric acid 도포군이 다른군에 비하여 적었고, C.M.+0.6N HCl 도포군과 대조군에서는 큰 차이가 없었다.
3. 신생백아질 형성 정도와 시기를 관찰하였던 바 C.M.+citric acid 도포군에서는 2주부터 시작되었고 3, 3주에서는 활발히 진행되었으며 C.M.+0.6N HCl 도포군과 대조군은 3, 4주부터 진행되었다.
4. 신생치근막 형성의 관찰에 있어서 4주에서는 C.M.+citric acid 도포군과 citric acid 도포군이 다른 구멍 비하여 치근막 섬유배열이 가장 잘 나타나고 있었다.
5. 치조골 흡수 및 재생 정도는 4군 모두 비슷하였으나 특히 C.M.+citric acid 도포군이 시술후 2주부터 활발히 진행되었다.

in the lower incisors with 0.008inch stainless steel ligature wiresand by modifying the normal diet with 33% sucrose.

In the macroscopic and distologic findings, tetracycline-treated group showed a few inflammatory cells and intact alveolar bone, and control group appeared severe inflammatory cell infiltration and bone loss. Whithin the limit of this study, it was suggested that tetracycline given orally may be recommended for the prevention of periodontal disease or as adjunct to periodontal treatment. However, long-term study will be necessary to better define its effectiveness on the prevention of periodontal disease.

A scanning electron microscopic study of rat gingiva and alveolar mucosa treated with chlorhexidine gluconate

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Following treatment with 2% chlorhexidine gluconate solution for 4 weeks, the surface of the gingiva and alveolar mucosa from the male albino rats was examined by the scanning electron microscope to attempt to determine the surface features whehter there were any noticeable changes. The appearances were as follows.

1. Pitted and reticular microridge pattern in the surface of the gingiva and alveolar nucosa was show in both the chlorhexidine-treated group and the control group.
2. Pitted pattern was tend to diminished and reticular microridges thinned as to the treated term beign longer.
3. Epithelial exfoliation was on the decrease.

Histologic study on the accelerated reattachment by the chemical agents in laterally repositioned flap

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Laterally repositioned flap procedure for covering of denuded root surfaces associated with root demineralization for accelerated reattachment with cementogenesis to dentin using defatting agent and acids were performed in 8 mongrel dogs.

The animals were sacrificed at 1, 2, 3 and 4 weeks interral after surgery. Then the specimens were prepared and evaluated histologically.

1. The surgically exposed tooth root surface was approximately 8 mm in average length, 4 weeks after surgery, control and citric acid groups the coverage of root surface was 6 mm chloroformmeta-

nol plus 0.6N NCl group was 5 mm and chloroform-methanol plus citric acid group was 7 mm. Since these findings are limited to only a few specimens, statistical relevance of healing response will have to await clinical healing trends monitored in larger group of experimental animals.

2. Histological finding on chloroform-methanol plus citric acid and citric acid specimen showed less epithelial migration than HCl and control groups.
3. On chloroform-methanol plus citric acid specimens the rapid and active formation of cementoid tissue and new bone were clearly noted at 3 and 4 weeks.
4. Chloroform-methanol plus citric acid and citric acid groups showed well orientation of new periodontal ligament at 4 weeks.
5. Resorption and formation of alveolar bone in chloroform-methanol plus citric acid particularly were active at 2 weeks than the remaining groups.

Electron microscopic study of the keratinization of the gingival epithelium and oral sulcular epithelium

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The purpose of this study was to investigate the keratinizing potential of human oral sulcular epithelium.

Sixteen dental students were selected for this study. Each subject brushed his teeth by intrasulcular tooth brushing method for 30 days. 30 days after, the appropriate size of marginal gingiva including oral sulcular epithelium and lamina propria was excised for examining the light and electron microscopic view, and then excised gingival tissue was sectioned in three. One was for light microscopic observation and the others were for electron microscopic observation. One part for light microscopic observation was stained with hematoxylin and eosin, another two parts for electron microscopic observation were prefixed with 3% Glutaraldehyde in Phosphate buffer solution for 24 hours. Tissues were rinsed with Phosphate buffer solution (PH 7.4) and postfixed in 1% Osmium Tetroxide for 2 hours. After tissues were dehydrated with graded ethanol series, they were embedded in Epon 812. After the oral sulcular epithelium and gingival epithelium were examined carefully, each part was sectioned 500 Å in thickness by means of Sorvall MT-2B Blum ultramicrotome. doubly stained with Uranyl Acetate and Lead Citrate and Examined with Hitachi-Hu-500 electron microscope.

The results are as follows :

1. Oral sulcular epithelium will keratinize to some degree.
2. Membrane Coating Granules are present in the intermediate layer of intrasulcular brushed oral sulcular epithelium
3. Keratohyaline Granules are present in the intermediate layer of intrasulcular brushed oral sulcular epithelium. And Keratohyaline Granule in intrasulcular brushed oral sulcular epithelium is regular in shape and rather small in size, and not associated with tonofilament.
4. Cytoplasmic changes from the intermediate layer to parakeratinized layer of intrasulcular brushed