크기로 잘라 2% paraformaldhyde-glutaraldehyde에 2시간, 1% osmium tetroxide로 2시간 고정한 다음 Epon 812로 포매, LKB 8800A ultratome으로 절편을 만든 다음 uranyl acetate와 lead citrate로 중염한 후 JEM 100B 전자 현미경으로 관찰하였으며, 그리고 또 다른 한편으로 1% toluidine blue 염색표본을 광학 현미경으로 관찰을 하였던 바 다음과 같은 결과를 얻었다.

1. FCA 주사후 1시간 및 3일 후의 관찰에서 혈관벽의 형태는 일률적으로 확장되고, 중성다핵 백혈구는 3일 및 7일군에서 혈관 내강내에 특히 많이 나타났다. 거식 세포, 중성다핵 백혈구 및 임파구는 주사후 3, 7 및 10일에 혈관 주위에 나타났다.
2. FCA 주사후 세포의 변화는 1시간 및 3일에서 중성다핵 백혈구의 수와, 활동성의 증가를 보였다. 주사후 1시간에 나타나는 거식 세포의 rough endoplasmic reticulum은 매우 발달되었고 비활동성이었다. 거식 세포는 주사후 3, 7 및 10일에서 가장 활동적으로 나타나며 다수의 공포들이 세포질 내에서 나타났다. 섬유아세포는 주사후 1시간 및 7일에 나타나며 세포질 내에는 많은 괴저 교원성 섬유속에 나타났다. 임파구와 형질 세포는 주사후 1시간 및 3일에서 별로 나타나지 않지만 주사후 10일, 14일 및 17일에는 거식세포의 출혈과 관련되어 점차 증가되었다.
3. 결체조직은 주사후 1시간, 3일 및 7일에서 교원성 섬유의 괴저 및 변성을 보였고 이런 양상은 10일에도 존속되었으나, 주사후 10일에서는 새로이 형성되는 교원성 섬유속이 나타났다.
4. 상피의 변화는 주사후 7일까지 rete peg의 변형 및 상피 조직의 분리가 나타났으나 이런 병적 변화는 점차 감소되며 17일 표본에서는 정상적인 형태를 보였다.

● 치은연하소파술과 unrepositioned flap operation 시술후 치아동요 및 치은퇴축에 대한 임상적 연구

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치주질환의 치료에 널리 사용되고 있는 치은연하소파술과 unrepositioned flap operation의 치료효과에 대한 연구로 10명의 치주질환 환자를 대상으로 상악우측 견치에서 좌측견치까지 split mouth design에 의해 임의로 한쪽은 치은연하소파술을, 다른 한쪽은 unrepositioned flap operation을 시술하여 수술전, 수술후 1주, 2주 3주 4주, 8주, 12주, 16주, 20주, 및 24주의 간격으로 치아동요도와 치은퇴축양을 비교 측정한 결과 아래와 같은 결론을 얻었다.

1. 치아동요도는 unrepositioned flap operation을 시술한 부위(평균 45.6% 감소)가 치은연하소파술을 시술한 부위(평균 28.8% 감소)에 비해 월등한 감소효과를 나타냈다.
2. 치은퇴축양은 치아의 정중선의 기준점에서 측정한 결과, 치은연하소파술을 시술한 부위(평균 0.05±0.02cm 퇴축)와 unrepositioned flap operation을 시술한 부위(평균 0.09±0.2cm, 퇴축)을 비교해 볼 때 별 뚜렷한 차이가 없었다.
3. 그러나 치간부위의 기준점에서 측정한 결과, 치은연하소파술을 시술한 부위(평균 0.08±0.01cm)에 비해 unrepositioned flap operation을 시술한 부위(평균 0.16±0.01cm)에서 통계학적으로 그 차이가 유의한 치은퇴축을 보였다.

lium to alveolar bone. The experimental animals were sacrificed at different time intervals of the injection ; 1 hour and 3, 7, 10, 14 and 17 days.

The light and electron microscopic observation was made(JEM 100B). The results were as follows :

1. The morphological change of blood vessels showed dilation and loosening of endothelial cell adherence in 1 hour, 3 days after FCA injection. Pericytes were slightly loosened from their adherent endothelial cell. PMN's were abundant in the lumen of 3 days, and 7 days. Macrophages, PMN's and lymphocytes appeared around the venule and capillary wall in 3, 7 and 10 days after the injection.
2. The marked increase in the number of PMN's, and their activity in 1 hour, and 3 days after the injection was observed. Macrophages appeared in 1 hour specimen but they are not active. Macrophages which appeared in 3, 7 and 10 days after the injection contained large numbers of vacuole. Fibroblast was also appeared in 1 hour and 7 days after the injection with numerous necrotic collagen fibrils in their cytoplasm. Lymphocytes and plasma cella were not abundant in 1 hour and 3 days.
3. The collagen necrosis and degeneration in connective tissue were observed in 1 hour, 3 and 7 days after the injection and this change persisted till 10 days specimen. Newly formed collagen fibrils were also appeared in 10 days.
4. Epithelium showed distortion of rete pegs and segregation of cells till 10 days after the injection. Thess pathologic change was gradually diminished and normal configuration was shown in 17 days specimen.

Clinical evaluation of tooth mobility and gingival recession following different periodontal treatment procedure-Subgingival curettage and unrepositioned flap operation

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The investigation compared the effects of unrepositioned flap operation and subgingival curettage on tooth mobility and gingival recession. The experimental procedure was carried out from the maxillary right canine to the maxillary left canine ; the "split mouth" design adopted using one side of the mouth for unrepositioned flap operation and the other side for subgingival curettage on random basis in 10 subjects for 24 weeks.

Tooth mobility was decreased on the side treated with unrepositioned flap operation with the value of 45.6%, while it was decreased on the side treated with subgingival curettage with the value of 28.8% after 24 weeks. However, the value of reduction in tooth mobility in the side treated with subgingival curettage was not statistically significant.

Gingival recession, measured on the midline of the crown, was occurred on the side treated with unrepositioned flap operation with the value of 8.5% (0.09± 0.02cm), while it was occurred on the

side treated with the subgingival curettage with the value of 4.4% (0.05± 0.01cm)

On the other hand, gingival recession, measured in the interdental area, was occurred on the side treated with unrepositioned flap operation with the value of 21.2% (0.16± 0.01cm), while it was occurred on the side treated with the value of 12.8% (0.08± 0.01cm).

Unreposioned flap operation showed more reduction of tooth mobility than subgingingival curettage, while the former showed marked gingival recession, especially in the interdental area than the latter did.

So it is difficult to determine shich operation procedure is better for periodontal problem ; each has its own shortcomings. Longitudinal study will be continued to compare the effect of unrepositioned flap operation and subgingival curettage.

Determination of in vivo fluoride uptake by enamel biopsy method

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A microsampling technique was used to measure enamel fluoride concentrations on the maxillary central incisors of 17 dental students before, 1, 2 and 4-week after toothbrushing with 3 fluoride-containing dentifrices(Elmex, Colgate and Lucky).

The results were obtained as follows :

1. Thickness of dissolved enamel layer exposed to 2N perchloric acid for 8-9 se was 13.4×0.211μm. The fluoride concentration of enamel before treatment was 719± 22.8ppmF
2. One week after treatment, there was no difference in the increase of F uptake between Colgate and Lucky dentifries except Elmex
3. Four weeks after treatment, Fluoride uptake rate produced by Elmex dentifrices was higher than those obtained with Colgate and Lucky dentifrices. It was fornd to be approximately 27.8%, 17.7% and 14.6% respectively.

A clinicals study of the effect of hinokititiol on human dental plaque and gingivitis

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The present investigation was undertaken as an attempt to study of the effect of Hinokitiol on dental plaque and gingivitis.

Twenty-nine male dental students of good health and having normal occlusion participated in this study.