

## ● Bifluoride와 MFP치약의 법랑질 불소 침착에 관한 연구

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22~25세의 치과대학생(60명)의 상악중철치에 Bifluoride(Fluocaril) 및 MFP(Lucky)치약을 사용전 및 4주, 8주, 12주간 사용후의 법랑질 불소농도를 정량분석한 결과 다음과 같은 결과를 얻었다.

1. 4주 사용후, Fluocaril군이 Lucky군보다 더 많은 불소침착을 보였다.
2. 8주 사용후, Fluocaril군의 법랑질 불소침착율은 Lucky군의 약 두배였다.
3. 12주 사용후는 Fluocaril군과 Lucky군간의 불소침착 증가에는 뚜렷한 차이가 없었다.

이 결과 Bifluoride 치약이 다른 MFP치약보다 충치억제 효과면에서 우수했다.

## ● Alloxan diabetes가 백서염증 치주조직에 미치는 영향에 관한 광학 현미경적 연구

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Alloxan diabetes가 기존 치주조직의 염증에 미치는 영향을 연구하기 위하여 350g 내외의 백서 숫놈 120마리를 선택하여 40마리씩 세군으로 나누었다.

제1군은 대조군으로, 제2, 3군은 실험군으로 정해 실험군의 백서에는 12mg alloxan monohydrate/100g/B.W를 복강내에 주사하여 alloxan diabetes를 일으킨 뒤 24시간후 제3군의 40마리에게는 3~5 I. U Isophan insulin 현탁액을 실험기간 동안 투여하였다.

각군은 다시 두군으로 나누어 한군에는 0.05% D. N. C. B를 치은에 도포하고 다른 군에는 2% B. S. A를 치은내 주사하여 염증을 야기시킨뒤 1주, 2주, 3주, 4주 간격으로 회생시켜 상하악골을 절제하여 10% 포르말린 용액에 고정하고 포매한뒤 H-E 염색을 시행하여 광학 현미경으로 관찰한 결과 다음과 같은 결론을 얻었다.

1. 전군을 통하여 D. N. C. B도포군에서는 2주, B. S. A 주입군에서는 1주에서 가장 심한 염증상을 보였다.
2. D. N. C. B 도포군에서는 다형핵 백혈구, 임파구, 단핵구 등의 침윤을 볼 수 있고 B. S. A 주입군에서는 임파구, 형질세포의 침윤을 볼 수 있었다.
3. 3주 및 4주의 표본에서는 특히 대조군에서 전반적인 염증의 소실을 볼 수 있었다.
4. 실험군중 insulin주입군에서 기존 염증세포의 심한 침윤이 감소되었음을 볼 수 있었다.

4. The degree of gingivitis of the right side was higher than that of left, but a difference of plaque amount between right and left side was not significant.

## A study of Zn concentration in calculus of periodontal patient

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The supragingival and subgingival calculus samples were collected from 44 subjects, 27 males and 17 females, who suffered from periodontal revealed more than degree 2 by Ennever's Calculus Surface Severity Index.

The concentration of Zn in their calculus was analyzed with an Atomic Absorption Spectrophotometry.

The results as follows :

1. The mean value of Zn concentration in supragingival calculus was  $46.04 \pm 32.22 \mu\text{g}/\text{mg}$  and was  $21.17 \pm 15.29 \text{mg}/\text{mg}$  in subgingival calculus. ( $P < 0.001$ )
2. There was no corelationship between aging and Zn concentration
3. The concentration of in supragingival calculus was higher than that in subgingival calculus. Comparison between two types was significant. ( $P < 0.005$ ).
4. No significant difference between supragingival and subgingival calculus was showed when Zn concentration in both sexes was compared.
5. The concentration of Zn showed the tendency of a linear increase with rising of Periodontal Disease Index(Ramfjord)

## Uptake of fluoride by enamel from Bifluoride and MFP dentifrices

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A microsampling technique was used to quantitatively compare enamel fluoride concentrations on the maxillary central incisors of sixty male dental students before, 4 weeks, 8 weeks and 12 weeks after toothbrushing with bifluoride(MFP with NaF) containing dentifrices(Fluocaril) and other MFP-containing dentifrices(Lucky)

The results were obtained as follows ;

1. Four week treatment showed much higher F uptake in Fluocaril group than in Lucky group.
2. Eight weeks after treatment, enamel F uptake rate of Fluocaril group was also approximately twice as much as that of Lucky group.
3. Twelve weeks after treatment, there was no apparent difference in the increase of F uptake between

Fluocaril and Lucky group.

These results suggest that bifluoride(MFP with NaF)-containing dentifrices are superior to other MFP-containing dentifrices for their cariostatic action.

## A light microscopic study on the effect of alloxan diabetic conditions to the inflamed periodontal tissue in rats

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One hundred and twenty sprague-dewley male rats were used in this study.

They were weighed about 350g, so that they could resist against the toxicity of alloxan monohydrate.

They were divided into three groups ; group I (control), group II, III (experimental)

on all the rats of experimental group, alloxan diabetes was induced by intraperitoneal injection of 12mg, alloxan monohydrate/100g/B. W.

Twenty four hours later, forty rats of experimental group were administered 3-5 I.U. Isophane insulin suspension was injected per a day throughout the expermental period(GIII), and the rest forty rats were not(GII).

Each group of rats were applied topically on interdental gingiva with 0.05% D. N. C. B. and the other injected with 2% B. S. A. into interdental gingiva every two days.

The subjects were sacrificed at 1st, 2nd, 3rd, 4th week after initial application of D. N. C. B. and B. S. A.

The samples were embedded and stained with H-E for light microscopic study.

1. Diabetes mellitus did slightly alter the nature and incidence of the gingival inflammation induced by local irritation
2. In comparison between B. S. A. sensitized and D. N. C. B. sensitized groups, generally the degree of inflammatory cells infiltration was prominent in 1st. week subgroup in the B. S. A. sensitized group. But the D. N. C. B. sensitized group was shown predominantly their inflammatory cells infiltration in 2nd. week subgroup.
3. In the diabetic groups, insulin injected subgroup showed disapperance of previously severe inflammatory cells infiltration.
4. The infiltration of inflammatory cells was most predominant in the 2nd. weeks subgroups of diabetic D. N. C. B. sensitized group without injection of insulin.