

● Alcohol섭취가 치은열구상피의 투과성에 미치는 영향

박병석 · 이동주 · 한경윤

조선대학교 치과대학 치주과학교실

음주가 치은조직의 모세혈관의 투과성에 미치는 영향을 규명하기 위해서 19~25세의 조선대학교 치과대학생중 제3대구치를 제외하고 결손치가 없으며 전신건강이 양호하다고 인정되는 남학생 31명을 선택하여 체중kg당 2ml씩의 증류수와 25% 및 40% ethanol을 1주일 간격으로 각각 섭취시킨 후 섭취 30분 후부터 6시간 후까지의 상악우측 제1대구치와 하악좌측 중절치의 치은열구삼출액과 혈압, 맥박, 체온을 측정하고 각각을 Student t-test와 분산분석(ANOVA)에 의하여 섭취전 측정치와 통계학적으로 비교분석하였던 바 다음과 같은 결론을 얻었다.

1. Alcohol농도나 치은의 염증도에 관계없이 alcohol 섭취 2시간 후에 치은열구삼출액이 최고치를 보였으며 시간경과에 따라 점차 감소되었고 6시간 경과후에 섭취전 측정치로 회복되었다.
2. 전치보다 구치에서 alcohol섭취 후 치은열구 삼출액의 양은 더 큰 폭으로 증가되었으며 회복시간이 더 지연되었다.
3. 치은열구상피의 투과성에 미치는 alcohol 섭취영향은 염증성 치은보다 건강한 치은에서 더 민감하였고 더 오랫동안 지속되었다.
4. 수축기와 이완기 혈압 모두 alcohol 농도에 관계없이 alcohol 섭취에 영향을 받지 않았다($P>0.1$).
5. Alcohol 섭취 2시간 후까지는 맥박($P>0.1$) 및 체온 ($P>0.1$)이 각각 유의성있게 증가되었다.
6. 치은열구삼출액, 맥박 및 체온의 미치는 alcohol 섭취영향은 alcohol 농도가 높을수록 더 오랫동안 지속되었다.

본 논문을 완성함에 있어서 시종 지도편달을 하여 주신 韓敬潤 교수님께 진심으로 감사드리며 협조를 하여 주신 치주과 의국원 여러분께 감사를 드립니다.

● Tetracycline-HCl이 치근면에 미치는 효과에 관한 연구

김기병 · 정현주

전남대학교 치과대학 치주과학교실

치근면에 tetracycline-HCl이 미치는 효과를 관찰하기 위하여 심한 치주염으로 발거한 치아 40개를 선택하여 노출 치근면 부위에 齒根面 평활술을 시행한 뒤 실험군으로 1, 2.5, 5, 10, 25, 50, 75, 100mg/ml의 tetracycline-HCl 용액에 5분간 침수시키고 대조군으로 pH 1의 구연산 용액에 3분간 침수시켜 처리한 뒤 주사전자현미경으로 관찰하고, 상기 방법으로 처리한 절편과 24시간 침수시킨 치근절편을 평형현미경적으로 관찰하여 다음의 결과를 얻었다.

1. 주사전자현미경으로 검사한 결과

농도 1mg/ml의 tetracycline 용액에 노출된 표본에서는 齒根面 평활술만 시행한 경우와 비교하여 별 차이가 없었고 농도 25~25mg/ml에서는 국소적으로 白堊質性 교원섬유의 노출을 볼 수 있었으며 象牙細管의 노출을 볼 수 없었다. 농도 50~100mg/ml 용액에 노출된 표본에서는 잔존 白堊質에서 白惡質性 교원섬유가 관찰되었으며 노출된 象牙質 표면에서는 열린 象牙細管이 관찰되어 구연산 용액으로 표본과 유사한 脫灰效果를 나타내었다.

Capnocytophaga showed no significant difference in frequency between progressing and nonprogressing group.

4. PMN chemotaxis inhibition was observed in same frequency both in progressing and nonprogressing group.
5. Serum IgG level to *A. actinomycetemcomitans* presented higher value in nonprogressing group than in progressing group based on bone resorption, while serum igG levels of some patients in progressing group were almost similar with normal subject.

These results suggested that frequency of isolation and antibody levels to *A. actinomycetemcomitans* might be the relevant factor for determination of progression of early localized juvenile periodontitis and longterm evaluation has to be done to clarify more influencing factors of disease progression.

The effect of drinking alcohol on the permeability of gingival sulcular epithelium

Byung Suk Park, Dong Joo Lee, Kyung Yoon Han

Department of periodontology, School of Dentistry, chosun University

To determinate the effect of drinking alcohol on the permeability of capillary in gingival tissue, thirty one male subjects : 19 to 25 years old, with general health and no missing teeth except third molar were selected from volunteers of dental students of Chosun University.

2ml per body weight(kg) of distilled water, 25% and 40% ethanol were orally administered to selected subjects at regular one-week interval.

The amount of gingival crevicular fluid of upper right first molar and lower left central incisor was measured by PERIOTRON(HARCO Electronics, Canada) from 30 minutes to 6 hours after administration of each experimental solution, and blood pressure, pulse rate and body temperature were subsequently checked.

Each score change between before and after administration of experimental solution was statistically analyzed by student t-test and ANOVA.

The following results were obtained :

1. Regardless of gingival inflammation, the amount of gingival crevicular fluid was increased in maximum value at 2 hour after administration, gradually reduced by time passed, and in 6 hours finally returned to the baseline value.
2. In posterior tooth than anterior tooth, the amount of gingival crevicular fluid was increased in greater extent and the returning time to baseline value was prolonged.
3. The effect of drinking alcohol on the permeability of gingival sulcular epithelium was earlier and longer in healthy gingiva than inflamed gingiva.
4. Both systolic and diastolic blood pressure were not influenced by alcohol drinking($P>0.1$), regardless of alcohol concentration.
5. By 2-hour after alcohol drinking, drinking, both pulse rate($P<0.01$), and body temperature($P<0.01$) were significantly increased.
6. The effects of drinking alcohol on gingival crevicular fluid, pulse rate, and body temperature were persisted longer in higher concentration of alcohol.

Effect of tetracycline-HCl on the periodontally diseased human root surface

Kee Byeong Kim, Hyun Ju Chung

Faculty of Dental Science, School of Dentistry, Chonnam Antional University

The purpose of the present study was to evaluate the effect of the tetracycline-HCl on root planed thoroughly.

For scanning electron microscopic study, tooth slab(6×3×2mm) was prepared from root surface that was involved in periodontal pocket and was immersed in tetracycline aqueous solution of 1, 2.5, 5, 10, 25, 50, 75, 100mg/ml for 5 min. and in citric acid solution(pH 1) for 3 min. respectively. All specimens were fixed and processed.

For fluorescence microscopic examination, root slab that was involved in periodontal pocket was immersed in tetracycline aqueous solution for 5 min. and 24hr and in citric acid solution for 3 min. respectively.

The specimens were rinsed and sectioned in approximately 150um thickness and observed.

The results were as follows :

1. Scanning Electron Microscopic examination revealed no difference at 1mg/ml tetracycline solution compared to the root planed specimen without tetracycline conditioning.

In 2.5-25mg/ml tetracycline solution, localized demineralization was observed in cementum only. Above 50mg/ml tetracycline concentration, cemental collagen fibers were observed in remained cemental surface, and opened dentinal tubules were observed in exposed dentinal surface. The demineralizing effect was similiar with the sample exposed to the citric acid.

2. In samples immersed for 5 min., fluorescent microscopic study revealed no yellow fluorescence at 1mg/ml tetracycline solution. In 2.5-25mg/ml tetracycline solution, there was weak and localized fluorescence on dentin and cementum surface. Above 50mg/ml tetracycline solution there was bright yellow fluorescence in the periphery of the cementum surface. There was no detectable color and intensity difference according to various concentrations. Specimens immersed for 24hr. revealed a bright yellow fluorescence through the full thickness of cementum. The intensity and color was strengthened according to increasing concentrations of tetracycline solutions. In exposed dentin surface, yellow fluorescence was observed along the dentinal tubules.

This result suggests the topical application of tetracycling above 50mg/ml in periodontal therapy will be useful for connective tissue reattachment.

A study of subgingival microbial change of adult periodontitis and rapid progressive periodontitis patients after plaque control

Gun Hee Woo, Hyoung Shik Shin

Dept. of Periodontoloty, School of Dentistry, WonKwang University.

The purpose of this study was to determine the microbial changes of Adult Periodontitis and