

## ● 치주질환에서 *Bacteroides intermedius*의 혈청형 특성에 관한 연구

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본 연구는 성인형 치주염, 급속진행형 치주염, 난치형 치주염, 사춘기성 치은염의 중요한 병인균으로 연구되는 *B. intermedius*의 각 질환에의 관여 혈청형을 간접면역형광법, SDS-PAGE, immunoblotting 방법을 통하여 연구한 결과 다음과 같은 결론을 얻었다.

1. 간접면역형광법 연구결과, 난치형 치주염 환자에서 분리배양된 15균주 중 13균주가 혈청형 C, 1균주가 혈청형 b, 1균주가 미확인 되었다.
2. 급속진행형 치주염 환자에서 분리배양된 13균주 모두 혈청형 C였다.
3. 사춘기성 치은염 환자에서 분리된 2균주는 모두 혈청형 b였다.
4. 섬유아세포 독성 실험결과 혈청형 c, a, b의 순으로 독성이 강하였다.

위의 결과로 볼 때 *B. intermedius*에서 혈청형 c가 가장 독성이 강하며 질환의 심도가 심한 환자에서는 혈청형 c의 발현빈도가 높았으며 질환의 심도가 가벼운 환자에서는 혈청형 b가 주로 나타났다. 섬유세포 증식억제에 대한 세포독성은 혈청형 c가 가장 강하였다.

## ● 상악 제2대구치 치근의 표면적 및 형태학적 구조에 관한 연구

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치주질환으로 인해 발거된 상악 제2대구치 38개를 대상으로 백악법랑경계부로 부터 치근단까지 1.5mm간격으로 절단하고, 각 절편을 채색슬라이드화한 후 확대투사해서, 치근길이와 백악법랑경계부로 부터 치근이개부까지의 거리, 치근의 표면적 및 치근표면적의 선상변위를 측정, 분석하여 다음과 같은 결론을 얻었다.

1. 세계 치근 각각의 평균길이는 근심협측치근이 11.50mm, 원심협측치근이 10.24mm, 구개치근이 11.32mm로 원심협측치근이 가장 짧았다.
2. 백악법랑경계부로 부터 근심협측치근이개부 및 원심협측치근이개부까지의 평균거리는 각각 4.54mm, 4.58mm로 근심협측치근이 먼저 이개되었으나 통계학적 유의성은 없었다.
3. 근심협측치근표면적의 평균치는 81.55mm<sup>2</sup>였고, 원심협측치근은 50.39mm<sup>2</sup>, 구개치근은 73.72mm<sup>2</sup>로 근심협측치근이 구개치근이나 원심협측치근보다 더 넓었다( $P < 0.05$ ,  $P < 0.05$ ).
4. 치근간 주위의 치근표면적의 평균치는 152.23mm<sup>2</sup>로서 전체 치근표면적의 42.54%를 차지하였고 세 치근 각각의 치근표면적보다 더 넓었다.
5. 전체 치근길이의 치관쪽 6mm까지의 치근에서 전체 치근표면적의 52.14%를 차지하였다.
6. 상악 제1구치와의 평균 치근표면적비교에서는 상악 제2대구치의 치근간표면적, 근심협측치근 표면적, 원심협측치근표면적, 구개치근표면적이 공히 작았으나 통계학적 유의한 차이는 원심협측치근에서만 나타났다( $P < 0.05$ ).

## Serotype specificity and fibroblast cytotoxicity of *Bacteroides intermedius* in periodontal disease

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Recent studies indicated that different serotype of *Bacteroides intermedius* might be involved in the different types of periodontal disease. The purpose of the study was to characterize of *Bacteroides intermedius* isolated.

From periodontal pockets in 7 patients with rapidly progressive(RPP), 7 patients with refractory periodontitis(RP), and 1 patient with pubertal gingivitis(PG), using indirect immunofluorescence and immunoblotting assays. Polyclonal antibodies to ATCC 25611, NCTC 9336, SUNYaB G8-9K-3(*Bacteroides intermedius* serogroups a, b, and c) were adsorbed with bacterial cells from other species.

and the species-specificity of the 13 strains isolated from 7 RPP patients, 13(100%) were identified as serogroup c. Of the 15 strains isolated from 6RP patients, 13(87%) were identified as serogroup c, 1(7%) were identified as serogroup b, and 1(7%) were identified. Of the 2 strains isolated from 1 pubertal gingivitis patient, all were identified as serogroup b.

Single serotype were isolated from the same disease site in rapidly progressive periodontitis and pubertal gingivitis, while one patients from refeactory harbored two serotypes in the same disease site(serotype b and c).

This study demonstrate that predominant serotype of active disease sites in rapidly progressive periodontitis and refractory periodontitis were serogroup c and inactive disease sites in pubertal gingivitis were serogroup b.

## A study of the root surface area and anatomical structure of the maxillary second molar

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The maxillary second molars have more percentage of fused root than maxillary first molars. In this study, the thirty-eight maxillary second molars with non-fused root were selected and studied, of which the root surface area(RSA), percentage of the RSA, and linear variation of the RSA calibrated. The location of the root separation was determined and the length of roots was calculated separately.

The results were as follows :

1. The mean length of the roots was 11.50mm for the mesiobuccal root, 10.24mm for the distobuccal root, and 11.32mm for the palatal root. The distobuccal root was shortest among the three roots.
2. The mean distance from the cemento-enamel junction to the point at which the roots separate from the root trunk was 4.54mm for the mesiobuccal root and 4.58mm for the distobuccal root. The mesiobuccal root separation was more coronal than the distobuccal root separation but the differences were not significant.

3. The mean root surface area was 81.55mm<sup>2</sup> for the mesiobuccal root, 50.38mm<sup>2</sup> for the distobuccal root, and 73.72mm<sup>2</sup> for the palatal root. The mean mesiobuccal root surface area was wider than the mean palatal root surface area(P<0.05).
4. The mean surface area of the root trunk was 152.23mm<sup>2</sup> and averaged 42.54% of the total root surface area. It was wider than the mean surface area of each roots.
5. The coronal 6mm area of the root length accounted for approximately 52.14% of the total root surface area.
6. There were no significant differences in most measurements comparing with maxillary first molar, but in RSA of distobuccal root the value of maxillary first molar was higher than maxillary second molar(P<0.05).

### The long-term evaluation of retained “HOPELESS” teeth after treatment

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The teeth considered periodontally “hopeless” are often extracted overzealously in the dental office. The purpose of this study was to examine the response of the retained “hopeless” teeth to the periodontal therapy.

Thirty-eight teeth in twenty patients, 13 males and 7 females, diagnosed as periodontally “hopeless” had been treated by either of the following treatments. Twenty-two received scaling and root planing alone and sixteen received flap procedure plus these therapy. Measurement of clinical parameters such as probing depth, loss of attachment and mobility were obtained at the initial examination and at the time of re-estimation. At the time of re-estimation the retained “hopeless” teeth exhibited significant reduction in probing depth(P<0.001) and gain of attachment(P<0.05) when compared with those of initial examination.

The only variable related to the improvement of clinical parameters was the age of patients. Twenty-six(68%) of thirty-eight “hopeless” teeth were functioning efficiently without pain. This study suggests that it is possible to treat periodontally “hopeless” teeth successfully and the effect of therapy on improving the maintenance of “hopeless” teeth should be further studied.

### Effect of chlorhexidine on early healing phase after periodontal surgery under periodontal pack

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A split-mouth double-blind study was conducted to compare the effects of periodontal packs with