

● 13세, 14세 학생에 있어서 교익방사선 사진으로 평가한 골소실의 유병율에 관한 연구

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13세와 14세 남, 녀 학생 411명을 대상으로 하여 치주질환으로 인한 골소실의 유병율을 알아보기 위해 교익방사선 사진으로 연구한 결과 다음과 같은 결론을 얻었다.

1. 한개나 그 이상 치아주위의 백악법랑경계에서 치조골능까지의 거리가 2mm를 초과하는 수평적 내지는 수직적 골소실 부위가 포함된 대상자의 24.8%(77명)으로 발견되었다.
2. 수평적 골소실(23.7%)이 수직적 골소실(7.1%)보다 더 많이 분포되어 있었다.
3. 수평적 골소실과 수직적 골소실이 가장 많이 나타나 있는 부위는 상악 제1대구치로 전체 병소의 45%를 차지하였다.
4. 치주염의 유병율이 여자에서 보다 남자에 높게 나타났다.
5. 검사대상에 포함된 대상자 중 유년형 치주염을 보여준 대상자는 1.3%(4명)이었다.
6. 대상자의 2/3정도가 1~2개의 골소실 병소를 나타냈다.

● Epidermal Growth Factor의 투여에 의한 마우스의 면역반응 변조

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면역계에 대한 EGF의 작용과 그 기전을 밝히기 위한 일련의 실험으로 EGF를 마우스에 면역적혈구로 면역하기 전, 후 및 전과 후에 투여하여 면역적혈구에 대한 Arthus반응, 지연성과민반응, 적혈구응집항체반응에 미치는 EGF의 영향을 평가함과 동시에 면역비장세포의 로켓형성능, 대식세포의 유주능 그리고 비장의 중량변화등에 미치는 EGF의 효과를 측정, 평가하여 다음과 같은 결론을 얻었다.

1. Arthus 반응은 EGF에 의하여 영향을 받지 않았으나, 지연성 과민반응은 EGF를 마우스에 면역적혈구로 면역하기 전 또는 후 4일간 투여한 경우에는 현저히 저하되었으나, EGF를 면역전후 8일간 투여한 경우는 오히려 다소 항진되었다.
2. 응집항체반응은 EGF를 항원감작 전에 투여하면 현저히 억제되었으나, 감작 후에 투여시는 다소 항진되었으며, EGF에 의한 응집 항체반응의 증감은 IgM항체에서 보다 IgG항체에서 현저하였다.
3. EGF는 마우스 복강 대식세포의 유주를 촉진시켰으나, 닭 백혈구의 유주에는 영향을 미치지 못하였다.
4. EGF는 면역 마우스의 비장세포의 면역적혈구에 대한 로켓형성율을 저하시켰으며, 체중당 비장의 무게 또한 EGF투여군에서 현저히 낮았다.

An investigation on the distribution of bacterial endotoxin within the periodontal pocket

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The aims of this study were primarily to investigate the distribution of endotoxin within the periodontal pocket, secondarily to establish whether any variations between the amounts of endotoxin from different teeth and finally if correlations exist between the quantity of endotoxin and the extent of periodontal destruction and between the quantity of endotoxin and the histologic degree of gingival inflammation.

15 single rooted teeth extracted following the clinical diagnosis of advanced periodontitis were used as experimentals.

5 impacted or periodontally healthy teeth were selected as controls.

Each sample was subjected to the hot phenol/water procedure after Westphal and Jann for the extraction of endotoxin and the quantity of endotoxin was assessed by limulus amoebocyte lysate assay.

The following results were obtained. :

1. The quantity of endotoxin associated with each periodontally involved tooth ranged from 26.7 to 931.2ng. The average amount of endotoxin isolated to 236.0ng, of which 31.0% existed in loosely adherent plaque, 63.7% in firmly adherent plaque, 2.5% in the calculus and 1.7% in the cementum, leaving a residue of 1.1% of endotoxin on the root surface.
In periodontally healthy teeth, the average amount of endotoxin isolated amounted to 3.92ng.
2. No statistically significant correlations were found between the amount of endotoxin and mean pocket depth ($r_s = +0.14$, $p > 0.10$) and between the amount of endotoxin and mean attachment loss ($r_s = +0.51$, > 0.05).
3. Statistically significant correlation was found between the amount of endotoxin and histologic degree of gingival inflammation ($r_s = +0.72$, $p < 0.01$).

A study on prevalence of bone loss in 13-14 years of age schoolchildren assessed by bite-wing radiography

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The prevalence of bone loss by periodontal disease was determined on bite-wing radiographs in 411 subjects, 205 boys and 206 girls, 13-14 years of age schoolchildren living in IRI city.

The criterion for periodontal bone was the distance from the cemento-enamel junction to the alveolar crest greater than 2mm.

The results obtained were as follows :

1. Horizontal and/or vertical bone loss, a distance exceeding 2mm between cemento-enamel junction and alveolar crest, was found in 24.8% of the accepted subjects.
2. Horizontal lesions were more prevalent than vertical lesions.
3. The most frequent location of bone loss (horizontal and vertical) was the maxillary first molars.
4. The prevalence of periodontitis was higher in boys than in girls.
5. The juvenile periodontitis type of lesion was found in 4 subjects (1.3%).
6. About 2/3 of the subjects revealed one or two lesions.

Effect of epidermal growth factor on the immune response in mice

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This study was attempted to investigate the immunomodulating effect of EGF on the antibody production of mice to sheep erythrocytes (SRBC), and on the migration ability of leukocytes, rosette-formation of immune lymphoid cells and lymphoid tissue.

EGF did not affect the development of Arthus reaction, but did influence the expression of DTH, depending on the timing of the treatment relative to antigen exposure. DTH to SRBC was remarkably inhibited if EGF was injected for 4 days before or after sensitization and was somewhat increased when EGF was treated for 8 days from -4 to $+4$ day of SRBC.

Hemagglutinin response to SRBC in compared treated with EGF before immunization was significantly decreased compared with that of counterparts. However, EGF administration after SRBC slightly increased serum antibody response. The IgG response was affected more greatly than the paired IgM response, suggesting that helper T cells might be the target of EGF induced immunoregulation rather than B cell itself in humoral immune responses.

EGF showed an enhancing effect on the migration of chicken leukocytes, suggesting that EGF-induced augmentation of migration of macrophages might be manifested by the modification of their cell membrane via their specific receptor for EGF.

EGF decreased not only number of rosette-forming cells but weight of spleens.

These results provide evidence that EGF acts on lymphoid system directly and it modulate strongly the immune responses.

In vitro attachment of human gingival fibroblast to tetracycline hydrochloride treated root surface

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This study was aimed to evaluate the effect of root conditioning with tetracycline-HCl on the fibrob-