4.24mm로 협측에서 치근이 먼저 이개되었으며, 협·설측간에 통계학적으로 유의한 차이가 있었다($p<0.05$).

● 세균성 내독소가 배양중인 치주조직세포의 증식과 Prostaglandin 합성에 미치는 영향

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細菌으로 부터 抽出한 lipopolysaccharide(LPS)가 齒齦纖維芽細胞(GFB)와 齒周靱帶細胞(PDL)의 培養 時, 細胞의 增殖과 prostagladin E_2(PGE_2)의 合成에 미치는 影響을 觀察하기 위하여 齒齦纖維芽細胞와 齒周靱帶細胞의 細胞 培養實驗을 施行하였다.

Porphyromonas(*Bacteroides*) *gingivalis*로 부터 分離한 lipopolysaccharide를 細胞培養液內에 여러가지 濃度(0.01, 0.1, 1.0, 10.0μg/ml)로 添加한 後 齒齦纖維芽細胞와 齒周靱帶細胞를 培養하면서, 細胞增殖에 미치는 影響을 알아보기 위하여 DNA에 編入된 [^{3}H]-thymidine을 定量하였으며, 同一한 lipopolysaccharide의 濃度에서 細胞로 부터 合成遊離된 prostaglandin E_2(PGE_2)의 量을 radioimmunoassay(RIA)를 利用하여 測定한 結果, 다음과 같은 結論을 얻었다.

齒齦纖維芽細胞와 齒周靱帶細胞는 lipopolysaccharide의 濃度가 10.0μg/ml인 境遇에서 細胞增殖이 有意하게 抑制되었으며 抑制幅은 齒周靱帶細胞에서 더 크게 나타났다. 齒齦纖維芽細胞는 lipopolysaccharide의 濃度가 1.0μg/ml와 10.0μg/ml에서 PGE_2의 合成遊離가 有意하게 增加하였으나, 齒周靱帶細胞인 境遇 lipopolysaccharide가 0.1μg/ml 以上인 모든 境遇에서 有意하게 增加되었다. 이는 lipopolysaccharde에 의해 齒齦纖維芽細胞와 齒周靱帶細胞의 PGE_2 合成이 增加되는 最低濃度와 量的 側面에서 相異하게 보이며, 齒周靱帶細胞가 lipopolysaccharide에 대해 더욱 敏感한 細胞라고 思料된다.

● 치아발거의 측면에서 본 치주질환과 치아우식증의 관계

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치아 발거의 측면에서 치주 질환과 치아 우식증간의 관계를 조사 연구하기 위하여, 1990년 1월부터 동년 12월까지 P대학교 병원 치과에서 치아를 발건한 1,251명(평균 연령 35.8세, 남자 640명, 여자 611명)의 2,585개 치아를 연구 대상으로 하여, 각 치아의 발거 원인을 분석 조사하고, 이중 치주질환과 치아 우식증에 의한 발거의 비율을 성별, 연령별 그리고 치아 유형별로 비교하여 연구한 결과 다음과 같은 결론을 얻었다.

1. 주된 발거의 원인은 맹출 이상(50.1%)이었으며, 치주 질환(19.4%) 보다는 치아 우식증(22.8%)에 의한 발거가 더 빈번하였다.
2. 30대 까지는 치아 우식증으로 인한 발거가, 40대 이후에서는 치주 질환에 의한 발거가 우새

the linear variation of the RSA were calibrated for each 1.5mm section.

The results were as follows.

1. The total mean root surface area was 374.23mm^2, root trunk surface area was 110.25mm^2 and mean root surface area was 263.98mm^2.
2. The mean surface area of the root trunk was 110.25mm^2 and averaged 40.63% of the total root surface area. The mean root surface area was 136.61mm^2 for mesial root, 127.37mm^2 for distal root. The mean mesial root surface area was wider than the mean distal root surface area, but the difference was insignificant statistically.
3. The coronal 6mm area of the root length accounted for approximately 51.32% the total root surface area and the coronal one-half of the root length accounted for approximately 64.80% of the total root surface area.
4. Apical 4.5mm of root length from root separation area accounted for approximately 54.60% of the mesial root surface area, 54.55% of the distal root surface area.
5. The mean distance from the cementoenamel junction to the point at which the roots separate from the root trunk was 3.0mm for buccal and 4.24mm for the lingual surface. The root separation for buccal surface was more coronal than the ligual surface and there was statistically significant difference(P0.05).

Effects of the bacterial endotoxin on the proliferation and prostaglandin synthesis of the periodontal tissue cells in culture

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The purpose of this study was to examine the effects of the bacterial endotoxin(lipopolysaccharide, LPS) obtained from *Porphyromonas(Bacteroides) gingivalis* on the proliferation and prostaglandin E_2 (PGE_2) synthesis of cultural gingival fibroblasts(GFB) and periodontal ligament cells(PDL).

Gingival fibroblasts and periodontal ligament cells were obtained from the cultured periodontal tissues of the sound maxillary premolar which was extracted for the orthodontic purpose.

The cellular proliferations were examined through the quantitive analysis of [^{3}H]−thymidine and the amounts of synthetic PGE_2 were checked by a radioimmunoassay kit(RIA) according to the specific concentrations of LPS.

The results were as follows :

1. The cellular proliferations of GFB and PDL were significantly reduced to about 72% at the concentration of 10.0μg/ml of LPS.
2. The releasing amounts of synthetic PGE_2 were significantly increased at 1.0 and 10.0μg/ml of LPS in GFB, and 0.01, 0.1, 1.0 and 10.0μg/ml of LPS in PDL.
3. The releasing amounts of synthetic PGE_2 in PDL were substantially more than in GFB at each concentration of LPS.
4. The cellular proliferation were significantly inhibited by LPS in the early stage, and the amounts of synthetic PGE_2 had the tendency to increase during the time period.