● 성인의 자연발생 초기 치주염시 치은조직의 전자현미경적 연구

김광석 · 최성근 · 김종관
연세대학교 치과대학

1. 치주낭상피세포의 세포 간격은 건강치은열구 상피보다 넓어져 있으며 교소체의 수도 현저히 감소되어 있으며 어느 곳에서는 상피세포간 간격이 세포의 넓이보다도 넓어져 있었다.
2. 치주낭 상피세포 간격에는 상피세포의 잔사로 보이는 microvilli, 떨어진 교소체 조각, 무정형의 솜털같은 침전물모양의 물질들이 흩어져 있었다.
3. 치주낭 상피세포내의 소기관의 공포화를 관찰할 수 있으며 심한 경우는 세포질들의 붕괴로 세포가 괴사되어 가는 경우가 관찰되었다.
4. 치주낭 상피세포의 기전판은 연속성을 잃고 군데 군데 불연속성을 나타내고 있었다.
5. 결체조직내의 섬유아세포는 건강조직내의 섬유아세포보다 그 방추형모양의 특성을 잃고 세포질, 사립체 등의 변화를 보이며 심한 경우에는 세포막이 파괴되어 세포질만 산만하게 흩어져 있는 경우가 발견되었다.
6. 염증세포는 대부분 형질세포이며 어떤 경우에는 형질세포도 병변을 보이고 있으며 그외 임파구, 다형핵백혈구, 대식세포 등도 보이며 비만세포도 가끔 발견되었다.
7. 교원섬유의 양도 치주염의 치은에서는 많이 감소되었다.

● 한국인의 성인 하악 치조골 결손 형태의 빈도 및 분포에 관한 연구

김인숙 · 감한평 · 김종관
연세대학교 치과대학

저자는 연세대학교 원주 의과대학 해부학 교실의 해부용 사체에서 적출한 22개의 하악골, 총 210개 치아를 대상으로 치조골 결손 형태의 빈도 및 분포를 고찰하여 다음과 같은 결론을 얻었다.

1. 치조골 결손 형태별로 빈도를 보면, furcation involvement 17.8%, inconsistent margin 15.8%, dehiscence 13.8%, fenestration 12.5%의 순으로 나타났다.
2. inconsistent margin, dehiscence, fenestration은 전치부에서 많이 나타났고, thickened margin, ledgelike margin, intrabony defect는 구치부에서 많이 나타났다.
3. furcation involvement는 연령이 증가함에 따라 class I 보다 class III의 빈도가 높게 나타났다.
4. 연령이 증가함에 따라 thickened margin, ledgelike margin은 감소하였고, inconsitent margin, interdental crater, intrabony defect, dehiscence와 fenestration은 증가하였다.
5. 같은 형태 치아 좌측과 우측을 비교해 보았을 때 별다른 차이를 보이지 않았다.

A study of surface roughness after root planing

Soo Back Lee, Kwang Se Hwang
Dept. of Periodontology, School of Dentistry, Chosun University.

Forty periodontally involved human teeth were selected to determine the surface roughness of root after treatment with hand instruments, file, curette, Jaquette scaler, and ultrasonic instrument and citric acid solution(pH 1.0). The following results were obtained.

1. The surface roughness when using the ultrasonic instrument was 21.05± 4.13μ, citric acid solution (pH 1.0) application for 10 minutes 19.20± 4.12μ, control group 18.41± 4.35μ, citric acid solution application for 3 minutes 15.50± 3.82μ, citric acid solution application for 1 minute 14.87± 3.61μ, Jaquette scaler 12.90± 2.24μ, file 12.43± 3.64μ, and curette 7.77± 2.03m.
2. There were no statistically significant differences between the ultrasonic instrument and citric acid solution application for 10 minutes, control group and citric acid solution application for 10 minutes, file and Jaquette scaler, citric acid solution application for 1 minute and Jaquette scaler, citric acid solution application for 3 minutes and citric acid solution application for 1 minute.
3. The surface roughness was increased in inverse proportion to time of citric acid solution application.
4. It can be suggested that root treatment with citric acid solution is available.

Electron microscopic study on clinically inflammed human gingival tissues of spontaneous incipient periodontitis

Kwang Seok Kim, Sung Keun Choi, Chong Kwan Kim
Dept. of Periodontology, School of Dentistry, Yonsei University.

The purpose of this study was to investigate the ultrastructural features of normal and inflammed gingival tissues.

The tissue specimens were taken from five patients with early periodontitis who came to Dept. of periodontology, the Dental College of Yonsei Univ. and from two dental students with healthy gingiva.

The tissues for electron microscopic observation were prefixed with 3% glutaraldehyde in Phosphate buffer solution for 24 hours. Tissues were rinsed with phosphate buffer solution(pH 7.4) and postfixed in 1% osmium tetroxide for 2 hours. After tissues were dehydrated with graded ethanol series, they were embedded in Epon 812, each specimen was sectioned 500Å in thickness by means Sorvall MT-2B Blum ultramicrotome, doubly stained with uranyl acetate and lead citrate and examined with Hitachi Hu-500 electron microscope.

The results are as follows ;

1. Intercellular spaces of periodontal pocket epithelium showed widening and had more reduced number of desmosomes than in that of healthy gingiva. In some areas, intercellular space appeared to be wider than the cell width.

2. In the intercellular spaces of periodontal pocket epithelium, microvilli which seems like epithelial debris, particles of fallen out desmosomes, and precipitation of floculent substance were scattered around.
3. There is the vacuolization of the cell organelle in the periodontal pocket epithelium. In the severe case we also could see the dying cell with disintegration of cytoplasm.
4. The basal lamina of the periodontal pocket epithelium had lost it's continuity and appeared discontinuous in some areas.
5. The fibroblast in the connective tissue of the inflammed gingival tissue appeared to have lost their spindle shape characteristic and showed cytoplasmic and granular changes. In the severe case the cell membrane was ruptured and contents of the cytoplasm were scattered.
6. Most of the inflammed cells were plasma cells. In some cases the plasma cells also seemed to be diseased. Additionally lymphocyte, P. M. N., macrophage and mast cell often could be seen.
7. In the case of periodontitis, the amount of gingival collagen fibers were reduced significantly.

A study on the incidence and distribution of alveolar bone defects in dried mandibles of Korean

In Sook Kim, Han Pyong Kim, Chong Kwan Kim
Dept. of Periodontology, School of Dentistry, Yonsei University.

In order to observe the incidence and distribution of alveolar bone defects according to age, type of tooth, the author had surveyed the 22 mandibles of dry human jaws of the department of Anatomy, the Wonju Medical College, Yonsei University.

210 teeth among 22dry human mandibles were studies.

The obtained results were as follows :

1. According to the morphology, the alveolar bone defects most frequently observed were furcation involvements(17.8%), inconsistent margins(15.8%), dehiscences(13.8%), fenestrations(12.5%) in order.
2. Inconsistent margins, dehiscences, fenestrations were much more common in the anterior segment, thickened margins, ledgelike margins, intrabony defects were much more common in the posterior segment.
3. As the age increases, Class III furcation involvements were increased, Class I furcation involvements were decreased.
4. As the age increases, thickened margins and ledgelike margins were decreased, whereas inconsistent margins, interdental craters, intrabony defects, dehiscences and fenestrations were increased.
5. As to the type and incidence of bone defect, there were no significant differences between left and right side of mandible.