

● 부신적출후 cortisone투여와 기계적 자극이 백서치주조직에 미치는 영향

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著者は 副腎摘出後 cortisone投與와 機械的 刺戟이 白鼠 齒周組織에 미치는 影響을 觀察하고자 양측 副腎을 外科的 摘出하고 prednisolone acetate 0.2mg과 0.25mg을 매일 皮下注射하며 上顎第1, 2 大白齒 齒間乳頭部를 週2回 刺戟하여 2, 3, 4, 6주 기간별로 病理組織學的으로 觀察하여 다음과 같은 結論을 얻었다.

1. 副腎摘出한 無處置群은 期間이 경과함에 따라 점차 造骨現像은 減少하고 破骨現像이 顯著하며 齒根膜의 組織細胞와 교원섬유가 減少하고 骨多孔症을 나타내었다.
2. prednisolone acetate 0.2mg投與群은 副腎摘出 無處置群에 比하여 炎症變化와 함께 齒槽骨은 吸收가 顯著하여 거의 상실되었고 骨多孔症을 나타내며 齒根膜의 교원섬유의 減少를 보였다.
3. prednisolone acetate 0.25mg投與群은 0.2mg投與群에 比하여 보다 顯著的한 骨多孔症과 함께 심한 齒槽骨의 상실을 가져왔다.
4. 骨多孔症 現像에 機械的 刺戟은 齒槽骨의 보다 심한 加重된 吸收消失을 가져왔다.

● 염증성 치은의 HLA-DR항원의 분포에 관한 면역학적 연구

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저자는 염증성 치주질환에서 치은상피 및 결체조직내의 염증세포에서 HLA-DR항원의 분포상과 염증성 치주질환의 진행도와와의 관계를 구명하고자 정상, 치은염 및 치주염 환자의 치은조직 35례를 채취하여 동결절편을 제작, HLA-DR항원에 대한 monoclonal항체를 이용하면 면역조직화학법 및 면역 형광법적 연구를 시행하여 다음과 같은 결론을 얻었다.

1. 정상치은조직에서 HLA-DR항원성은 기저세포층 상부의 소수의 수지상세포에서만 관찰되었다.
2. 치은염이 있는 조직에서는 HLA-DR항원에 양성인 수지상의 세포의 수는 증가하였으며 그 부위도 기저세포층 상부에 국한되지 않고 상피의 보다 광범위한 부위에서 나타났으며 한편 치은상피에서는 주로 기저세포의 세포간극 부위에서 HLA-DR에 약한 양성반응을 보였다.
3. 치주염에서는 상피내의 HLA-DR양성반응을 보이는 수지상의 세포는 더욱 증가하였으며 특징적으로 기저세포와 극세포층 하부의 세포간극에서 HLA-DR양성반응을 나타내었는데 이러한 상피내의 HLA-DR항원성은 진피층에 침윤된 염증세포들과 유사한 정도의 HLA-DR양성반응이었으며 이 항원성은 치주염의 진행도와 거의 일치하여 증가하였다.
5. 치은 상피에서의 HLA-DR양성반응은 치주질환의 진행도와 관련하여 증가하며 따라서 HLA-DR항원은 치주염의 진행상태를 판정하는데 좋은 지표가 될 수 있다.

One hundred eleven female Sprague-Dawley rats, two months of age and weighting approximately 150gms, were utilized as experimental animals. Bilateral adrenalectomy was performed using a dorsal approach. The adrenal glands were removed together with their surrounding fat and the tissue block was fixed in 10% formalin and prepared for histologic examination.

The animals were divided into two groups. The experimental group was also divided into group I and Group II, which are forty animals each other. The control group was divided into Group III and Group IV, which are twenty animals each other. Group I rats received 0.2mg prednisolone acetate in daily subcutaneous injections and Group II rats received 0.25mg prednisolone acetate in daily subcutaneous injection.

After one week, interdental papillae on lower right and second molar areas were irritated by explorer during two weeks. But Group III rats received no treatment and Group IV rats were adrenalectomized under no treatment condition. In each group, eight rats were sacrificed after experiment and the interval observation was 1, 2, 3, 4, 6 week. The lower jaw on right molar area were removed, fixed in 10% formalin, decalcified in 5% nitric acid and sectioned in paraffin. Sections were stained with hematoxylineosin.

The results obtained were as follows.

1. In the control group(Group IV), osteoblastic activity was gradually reduced, osteoclastic activity was remarkably increased. Fibroblasts and collagen fibers of periodontal membrane were reduced and osteoporosis was noted.
2. In 0.2mg cortisone-injected animals, the inflammatory changes and the alveolar bone loss appeared to more severe than the Group IV animals, the osteoporosis was noted and the collagen fibers of periodontal membrane were reduced.
3. The alveolar bone loss accompanied by the osteoporosis appeared to be more severe in 0.25mg cortisone injected rats than in 0.2mg cortisone-injected rats.
4. Mechanical irritation on the osteoporosis caused the more severe resorption and loss of alveolar bone in experimental animals.

Immunologic study on the distribution of HLA-Dr antigen in the inflamed gingiva

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This study was performed to determine if there was any relationship between the HLA-DR antigen distribution in the inflamed gingival and connective tissue and the progression of inflammatory periodontal disease.

Gingival tissues were obtained from 30 patients with periodontal disease and from 5 healthy volunteers. In all cases, the tissues were embedded in OCT compound and frozen in Vryo-cut. And 3 pieces of 6 μ m serial frozen sections were obtained from each specimen.

These tissue preparations were divided into three groups : they were processed for Hematoxyline-

Eosin staining, for immunochemical method, and for HLA-DR antigen analysis using a mouse monoclonal antibody. All tissue sections were viewed using light microscope and immunofluorescence microscope.

Following results were obtained

1. In normal gingival epithelium, staining of HLA-DR antigen was confined to a few dendritic cells present in a suprabasallayer.
2. The number of HLA-DR-positive dendritic cells in tissue from gingivitis group were increased and generally distributed in other epithelial layer including suprabasal layer. On the other hand, intercellular bridge of basal cell in gingival epithelium exhibited a weak HLA-DR reactivity.
3. In tissue from periodontitis group, HLA-DR-positive dendritic cells were more numerous than those of gingivitis group. Intercellular bridge within both stratum basale and stratum spinosum exhibited characteristic HLA-DR reactivity in tissue form periodontitis group. The density, morphology and distribution of HLA-DR-positive dendritic cells within epithelium closely reemled those of infiltrated inflammatory cells within the dermis. Furthermore, HLA-DR reactivity was proportionately increased by the progression of periodontitis.
4. HLA-DR reactivity within gingival epithelium was increased in relation to the progression of periodontal disease. Consequently, this finding would suggest that HLA-DR antigen is one of specific indicators in evaluation of progression of periodontitis.

An experimental study on healing response of intraosseous lesion following the use of hydroxyapatite grafting and citric acid application on dogs

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This study was undertaken to study the healing response of four periodontal regenerative procedures in the treatment of periodontal intraosseous defects on dogs.

After the mucoperiosteal flaps were raised, test procedures included :

- 1) Root planing procedure(R)
- 2) Root planing with citric acid conditioning of the root(CR)
- 2) Root planing with grafting of hydroxyapatite(HR)
- 4) Root planing with citric acid conditioning of the root and grafting of hydroxyapatite(CHR)

Eight dogs were equally divided into four groups in the test. Periodontal three-wall intrabony pockets were created artificially with surgical bur and chisel on the mesial surfaces of the third, fourth premolars and tin-foils were adapted to make a chronic inflammatory status.

All defects were reopened 9weeks later and the foils were removed and bur-notches were made on one root at the base of each defect to serve as reference points and then four regenerative procedures were performed.

Thereafter, dogs were serially sacrificed on the 2, 4, 8, 16th week and the specimens were prepared and stained with hematoxylin and eosin, and Gomori's trichrome stain for the light microscopic finding.