

● 치밀성 Hydroxyapatite와 다공성 Replamine form hydroxyapatite가 치근 분지부 병소 치유에 미치는 영향에 대한 실험적 연구

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저자는 8마리 잠종성견을 대상으로 하여 하악소구치부의 치근분지부 골을 외과적으로 제거하고 6주간 stainless steel wire를 관찰하여 자연치유를 방해하고 치태침착을 증가시켜 만성치주염을 동반한 치근분지부 병소를 야기시킨 후에, 아무 치료도 하지 않는 경우(비치료 대조군), 치은박리 소파수술만 시행한 경우(치료 대조군), 치은박리 소파수술과 함께 분지부병소에 치밀성 Hydroxyapatite를 이식한 경우(HA군), 다공성 Replamine form hydroxyapatite를 이식한 경우(RHA군), Polymeric reinforced zinc-oxide eugenol을 이식한 경우(IRM군)의 5군으로 나누어 시간 경과에 따라 2주, 4주, 8주, 12주 후에 실험동물을 희생시켜 조직학적으로 비교, 관찰하여 다음과 같은 소견을 얻었다.

1. RHA군에서 이식재 주위 신생골 형성은 2주부터 골양조직의 형성이 관찰되어, 12주까지 골형성 및 치밀도가 증가되었다.
2. 12주 소견에서 HA군의 이식재 주위는 치밀한 결합조직으로 둘러싸고 있었고, IRM군은 심한 염증성 결합조직으로 둘러싸여 있었다.
3. 치근간골 상부의 조골세포 활성화는 IRM군을 제외한 실험군과 대조군의 2주 소견에서는 활발하였으며 그후 점차 감소하는 경향을 보였다.
4. 염증세포 침윤 정도는 치료 대조군과 HA군, RHA군에서는 시간이 경과함에 따라 감소하였으나, 비치료 대조군과 IRM군에서는 지속적인 심한 염증세포 침윤양상을 보였다.
5. 상피의 근단이동은 대조군과 실험군에서 전 실험기간에 걸쳐 존재하였다.
6. 모든 실험군의 12주 소견에서 이식재와 치근사이 결합조직 섬유화의 기능적인 부착 양상은 나타나지 않았다.

● 치주 질환 종류에 따른 치은표면 특징에 대한 주사전자현미경적 연구

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저자는, 각기 다른 임상적 특징과 진행을 보이는 치주질환시 치은 상피의 표면구조가 질환별로 차이가 있는지 알아보고, 차이가 있다면 이를 질환의 본태와 병인, 진행과정을 규명하고 질환을 진단함에 있어서 현미경적 진단의 방법으로 응용할 수 있는지의 여부를 알아보기 위하여, 임상적 진단이 비염증성 탈락된 치은 증식증, 재발성 아프타성 치은 궤양, 박리성 치은염, 진행된 치주염과 치주 농양으로 내려진, Y대학교 치과 대학 병원 치주과에 내원한 환자 25명을 대상으로 치주 치료를 하지 않는 상태의 병소부위 가운데 각화성 치은 부위를 선택하여 주사 전자 현미경으로 관찰하여 다음과 같은 결론을 얻었다.

1. 세포 형태는 치은 증식증에서는 정상과 유사한 사각형 또는 다각형, 재발성 아프타성 치은 궤양에서는 세포가 탈락되는 듯하나 세포 주위 경계가 편평한 장방형, 박리성 치은염에서는

irritation.

After the development of experimental periodontitis, ascorbic acid and/or Zea Mays L. was administered. The rats were sacrificed on the 1st, 3rd, 7th, 10th, 14th, and 21th day. The experimental regions were surgically excised out and routinely processed for microscopic examination. The specimen were stained with Hematoxylin-Eosin.

The results were as follows :

1. In group 5, the extensive inflammatory tissue destruction and root resorption appeared toward root apex but the initiation of epithelial regeneration, formation of granulation tissue, and osteoblastic activity were observed at 10th day and those were more matured at 14th day. The osteoblastic activity was increased at 21th day.
2. In group 6, the proliferation of dense periodontal ligament fiber and osteoblastic activity was remarkably increased.
3. In group 1, the repair of osteoclastic area appeared somewhat earlier than group 5. The epithelial regeneration and proliferation of the newly formed connective tissue appeared at 10th day, those were matured profoundly, and the osteoblastic activity was increased at 14th day. At 21th day, the complete epithelial regeneration with the increased thickness of the keratinized layers and proliferation of the connective tissue was remarkable.
4. In group 2, healing appeared somewhat earlier versus group 1. After 7th day, the epithelial regeneration, decreased inflammatory cells in number, proliferation of connective tissue and the osteoblastic activity appeared. The repair of alveolar bone was observed at 10-14 days.
5. In group 3, healing was earlier than group 1,2. The epithelial regeneration with Keratinization was observed at 10th day. The connective tissue was also repaired. The osteoblastic activity was remarkably increased at 14th day. The appearance at 21th day was normal tissue.
6. In group 4, the extensive osteoclastic appearance with inflammation, extending to root apex, was at 3-7 days. But root resorption. osteoclastic and osteoblastic activity were persisted at 10th day. Healing appearance at 21th day was slighter than those of group 3.

An experimental study of the effects of dense hydroxyapatite and porous replamine-form hydroxyapatite in the experimental furcation area of dogs

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The aim of the present study was to evaluate the effects of implant materials such as dense hydroxyapatite, porous replamine form hydroxyapatite, polymeric reinforced zinc-oxide eugenol in the treatment of furcation involvement area of dogs.

Experimental furcation defects created in the mandibular 2nd, 3rd, 4th premolar of 8 dogs.

Bone was surgically removed from the furcation area and stainless steel wires were passed through the furcations and ligated.

After 6 weeks, the wires were removed, and regenerative procedures were performed in experimen-

tal areas divided into 5 groups.

The 5 groups were as follows ;

- 1) no treatment(Untreated control group)
- 2) flap operation(Treated control group)
- 3) flap operation(Treated control group)
- 4) flap operation with polymeric reinforced zinc-oxide eugenol implant(IRM)

At 2,4,8,12 week, dogs were serially sacrificed and the specimens were prepared with hematoxylin and eosin stain for the light microscopic finding.

The results were as follows ;

1. In the RHA group, osteoid tissue formation around the implant material was observed at 2 week, and bony density and amount was increased in the course of experimental periods.
2. In the HA particles were surrounded by dense connective tissue, while IRM group, severe inflammatory cell infiltration in the connective tissue was observed at 12 week.
3. Highly activated osteoblast on the interradicular bone was observed in all groups except IRM group at 2week, but it decreased gradually.
4. The degree of inflammatory cell infiltration was decreased in the course of time in the HA, RHA and treated control group compared with that of IRM and untreated control group.
5. The epithelial migration was observed during whole experimental periods in all groups.
6. At 12 week, connective tissue fibers in periodontal ligament space were not arranged functionally in the experimental groups.

Scanning electron microscopic study of the gingival surface characteristic of several types of periodontal disease

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The purpose of this study was to evaluate the differences of the gingival characteristics among the several types of periodontal disease.

Twenty-five individuals clinically diagnosed as normal gingiva, dilantin recurrent aphthous ulcer, desquamative gingivitis, advanced periodontitis and periabscess were selected for the study.

Mainly keratinized gingival surface lesions were examined in scanning electron microscopy.

The results were as follows :

1. While in normal gingiva epithelia were square or polygonal shape and markedly by raised intercellular border, in dilantin hyperplasia, gingival epithel square or polygonal shape similar to normal gingiva, in recurrent aphthous ulcer, rec shape with exfoliating and flat cell periphery and in desquamative gingivitis, spiripolygonal or diamond shape. Gingival epithelia of the above had even surface sinormal gingiva.

In advanced periodontitis, gingival epithelia were convex oval or polygonal shape obscure intercellular border and in periodontal abscess, rectangular shape with exi and rolling cell periphery like