骨形成을 보였으나 실험기간동안 吸收像은 나타나지 않았다.

3. 結晶型인 Hydroxyapatie의 경우 多核巨大細胞와 貪食細胞가 4週부터 나타났으나 이로인한 吸收像은 없었으며 8週에서 微弱한 骨樣組織이 관찰되었다.
4. β-Tricalcium phosphate인 경우 6週부터 骨樣組織의 形成과 吸收像을 나타내었다.
5. 시험기간동안 插入된 利植材와 下方向骨組織과의 癒合은 관찰되지 않았다.
6. 對照部에서는 造骨細胞가 1週째부터 下方骨組織 表面에서 관찰되었고 4週째에 거의 正常인 骨形成을 보여 모든 實驗部보다 骨形成이 빠르게 나타났다.
7. 모든 利植材에서 實驗全期間동안 組織내 異物反應은 나타나지 않았다.

● 견사 및 Wire 결찰이 성견 치주조직에 미치는 영향에 대한 실험적 연구

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성견의 상악 제1, 2전치에는 wire를 하악 제2, 3전치에는 견사를 각각 결찰하고 상악 우측 1, 2전치(GIB)와 하악 우측 2, 3전치(GIIB) 부위에는 1일1회 치솔질을 시행하고 상악 좌측 1, 2전치(GIA)와 하악 좌측 2, 3전치(IIA)부위에는 치태축적이 되도록 방치한 다음 실험시작과 실험시작후 1, 2, 4, 5주째에 각각 1마리씩 희생시키고 실험부위를 적출한후 탈회시켜 통법에 따라 Hematoxylin과 Eosin염색, Gomori' trichrome 염색을 하여 치조골 상방의 변화를 조직병리학적으로 비교관찰하여 다음과 같은 소견을 얻었다.

1. 치은열구상피와 부착상피 하방의 결체조직에서의 염증세포 침윤정도는 5주째 소견에서 GIIA, GIA, GIIB, GIB의 크기 순으로 나타났다.
2. 치은열구상피와 부착상피 하방의 교원질감소는 GIIA에서 2주째에 GIA에서 4주째에 나타나기 시작하였으며 GIIA의 5주째에서 뚜렷이 볼 수 있었다.
3. 치은열구상피의 증식과 비후는 GIIA 1주째와 GIA 2주째에 나타나기 시작하였으며 5주째에는 전 실험군에서 관찰되었다.
4. 횡중격섬유의 소실시작은 GIIA의 5주째에서만 볼 수 있었다.
5. 부착상피와 하방이동은 전 실험기간에 걸쳐 볼 수 없었으나 GIIA의 5주째에서 부착상피의 비후가 관찰되었다.

● 백서다형핵백혈구의 화학주성에 미치는 치태의 영향에 관한 연구

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齒苔가 多形核白血球의 化學走性에 미치는 影響을 觀察하기 위해 體重이 250gm~300gm Spraque-Dawley 白鼠 17마리의 心臟을 穿刺한 後 血液을 採集하여 多形核白血球를 準備하고 第1群(齒齦緣上齒苔群), 第2群(齒周囊이 3㎜以下의 齒齦緣下齒苔), 第3群(齒周囊이 3㎜以上의 齒齦緣下齒苔,

materials cyanoacrylate bond was applied over the flap margin. The interval of each observation was 1, 4, 6, 8, week after implantation and examined by means of histologically with microscope.

The results obtained were as follows;

1. In all cases of histological view, there were observed the proliferation of fibroblasts in 1 week, and the maturation of the dense collagenous connective tissue in 4 weeks.
2. There was observed osteoid in the postoperative-two-week sample, and showed the fastest new bone formation in Replamineform Hydroxyapatie-implanted-Case, but the resorptive phenomena were not appeared during experimental period.
3. In crystalline-implanted-case, polynuclear giant cell and macrophage were observed from postoperative 4 weeks, but there were not revealed resorptive phenomena caused by them.
4. In β-Tricalcium phosphate-implanted-case, formation and resorption of osteoid tissue were observed in and after 6 weeks.
5. The fusion of the inserted implant material and its adjacent bone was not observed.
6. In the control site, there was observed osteoblast, form 1 week, on the bone surface adjacent to implant material and appeared the almost normally formed bone in 4 week.
   The bone formation in the control site was appeared more fast than that in the experimental site.
7. In all implant materias, foreign body reaction within tissue was not showed during a whole experimental period.

An experimental study on the effects of silk and wire ligatures on the periodontium in dogs

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This study was undertaken to observe histopathologic changes of periodontal tissues in dogs after ligation of silk and wire on the cervical area of front teeth, and to evaluate the effect of mechanical plaque control.

In this experimental study, 5 dogs were used and, in each dog, wire ligatures were placed on the cervical of upper 1, 2 front teeth while silk ligatures were placed on the cervical area of lower 2, 3 front teeth.

Then upper right 1, 2 front teeth(G I B) and lower right 2, 3 front teeth(G II B) were undertaken tooth brushing, while upper left 1, 2 front teeth(G I A) and lower left 2, 2 front teeth(G II A) were remanined to accumulate deposits on the teeth.

Thereafter, dogs were serially sacrificed on 0, 1, 2, 4, 5th week after ligation of wire and silk.

The specimens were obtained in block and made the original silides cut with a thickness of 8μ and stained with hematoxylin and eosin, Gomori's method.

The result of this study were as follows:

1. The inflammatory cell infiltrate beneath the crevicular and junctional epithelium was shown in

the decreasing order of GIIA, G I A, GIIB, G I B at 5th week.

2. The loss of beneath the crevicular and junctional epithelium was begun at 2nd week in aGIIA, 4th week in G I A, and this feature was remarkable at 5th week in gIIa.
3. The proliferation and thickening of crevicular epithelium was begun at 1st week in GIIA, 2nd week in G I A, and it was shown at 5th week in all groups.
4. The breakdown of transseptal fiber was shown at 5th week in GIIA only.
5. The apical shift of junctional epithelium was not induced in all experimental periods, but the thickening of junctional epithelium was resulted at 5th week in GIIA.

A study of chemotactic effect of dental plaque to rat polymorphonuclear leukocytes

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The purpose of this research was to investigate the chemotractic effect of rat PMNLs to the dental plaque extracts.

Dental plaque was collected on the tooth surfaces and pockets and devided into four groups, such as supragingival plaque (Group 1), shallow subgingival plaque (Group 2), deep subgingival plaque (Group 3), and sonicated supragingival plaque (Group 4). The control group (Group 5) of chemoattractant was culture media M-199 only.

And chemotactic effect was assessed by Blind Well Chamber method with Nuclepore Filter. After 90 minutes incubation, number of rat PMNLs was countered with microscope in lower chamber and in distal surface of filter pore.

The following results were obtained.

1. Chemotaxis of PMNLs from each experimental groups (Group 1, 2, 3, 4) was increased more than that of the control group significantly. ($p<0.05$)
2. On number of PMNLs passing through the Filterpore, subgingival plaque group attracted the number of PMNLs more than that of supragingival plaque group significantly. ($p<0.05$)
3. On number of PMNLs which is reached to the distal surface on Nuclepore Filter, the difference between the subgingival plaque group and the supragingival plaque group were not significant. ($p<0.05$)
5. In comparision of sonicated supragingival plaque group and non-sonicated supragingival group, there was not significant differences in the number of migrated PMNLs.