

● 외상교합시 성견 치주조직에 Oxytalan 섬유 변화에 대한 전자현미경적 연구

노 문 호

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저자는 연구에 사용된 5마리의 성견중 1마리는 대조군으로 하고 나머지 4마리를 각 실험일수에 따라 3일군 7일군 15일군 30일군으로 나누어 성견의 치아에 외상교합을 가했을 때 Oxytalan섬유의 크기 수 분포의 변화를 전자현미경적으로 관찰하여 다음과 같은 결과를 얻었다.

1. 성견의 치주인대에 존재하는 Oxytalan섬유는 대조군과 실험군 모두에서 혈관주위로만 분포되어 있다.
2. 교합으로 인한 외상이 가해진 후 Oxytalan섬유는 주로 3일군에서 그 수가 증가하였으며 시간이 경과함에 따라 차츰 감소되는 경향을 보였다.
3. 전자현미경 소견상 Oxytalan섬유는 주기성을 보이지 않으며 직경 10Å 정도의 미세하고 길이가 짧은 섬유로서 혈관주위로 불규칙하게 흩어져 있었다.
4. 형태학적으로 Oxytalan섬유가 혈관주위로만 분포되는 점을 보아 이 섬유의 기능은 치아에 압력이 가해질 때 치주인대 혈관의 안정성에 기여하여 혈류를 조절하는 것으로 사려되었다.

● Modified ENAP에 의한 치주낭상피 제거양상에 관한 연구

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Modified ENAP을 이용하여 치주낭 상피 제거 양상을 연구하기 위하여 치주수술을 요하는 서울대학교치주과에 내원한 20명의 환자를 선택하였다.

실험대상 치아는 제1소구치에서 제2대구치 사이에서 정해 sulcus bleeding index와 치주낭 깊이를 잰 뒤 Modified ENAP와 reverse bevel incision을 사용하여 각각 치주낭 상피를 제거한 다음 잔존 외벽을 치은절제술 혹은 Tagge씨의 방법을 이용하여 절제한 다음 통법에 의해 표본을 제작한 뒤 광학현미경으로 관찰하여 다음과 같은 결론을 얻었다.

1. Modified ENAP시술을 치은 염증이 심하지 않은 sulcus bleeding index 1혹은 2群의 경우 아주 효과적으로 치주낭 상피 제거 양상을 나타내었다.
2. 치은의 염증이 심화된 경우 즉 sulcus bleeding index 3群의 경우는 reverse bevel incision이 Modified ENAP보다 치주낭상피 제거에 보다 효과적인 방법이 되겠으나 큰 차이는 보이질 않았다.

● 치은판막술에 있어 치간골 노출 및 치간피개시의 임상적 비교 연구

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치주수술시 사용되는 두가지 방법의 치간치치, 즉 치간 완전 노출술식과 치간 완전 접합술식

Prostaglandin E and F2 α levels in inflamed human gingiva

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This experiment was performed to study changes on the contents of prostaglandin E and F2 α according to the severity of gingival inflammation, the loss of alveolar bone and the depth of periodontal pocket in 50 patients with chronic periodontal disease. Preoperative preparations, consisting of plaque control and scaling, were carried out on all patients.

The clinically evaluated inflamed gingivae were excised under local anesthesia and stored in liquid nitrogen.

Tissue samples were homogenized in the solution of 1.0ml phosphate buffered saline and prostaglandins were extracted by the mixture of 3ml ethyl acetate : isopropanol : HCl(3 : 3 : 1 : v/v).

Organic phases, separated by centrifugation, were transferred to polypropylene tubes and were dried in a 55°C water bath. And then samples were stored at -20°C for analysis.

The concentrations of prostaglandin E and F2 α within the gingival extracts dissolved in gel tris buffer were measured by radioimmunoassay.

The results were analyzed according to sulcus bleeding index (SBI), bone loss and depth of periodontal pocket.

1. The concentration of PGE was increased according to the severity of gingival inflammation, but that of PGF2 α was not changed.
2. The concentration of PGE was increased according to the loss of alveolar bone, but that of PGF2 α showed a tendency to decrease.
3. The concentration of PGE and PGF2 α was increased according to the depth of periodontal pocket.
4. The concentration of PGF2 α was higher than that of PGE in inflamed tissues.

PGE 6.6–102.4pg/mg, total mean : 33.8 ± 3.37 pg/mg

PGF2 α 9.1–220.8pg/mg, total mean : 72.2 ± 5.86 pg/mg

An electron microscopic study on the changes of the oxytalan fibers in periodontium on the effect of trauma from occlusion in dogs

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The purpose of this study was to investigate the electron microscopic changes of the oxytalan fibers in periodontium on the effect of trauma from occlusion.

The experiments were performed in five dogs. One dog was used as control and the other four dogs as experimental groups. According to the experimental periods, the experimental groups were classified into 3day group, 7day group, 15day group and 30day group.

The experimental animals were investigated by histochemical staining method.

The following findings were obtained :

1. The oxytalan fibers in the periodontium of the dogs were located perivascularly.
2. The number of oxytalan fibers was increased in the 3day group, but the subsequent decrease was followed.
3. Under the electron microscope the filaments of oxytalan fibers do not show any regular periodicity. The filaments are approximately 100–15Å in diameter and are of fine, short length. They are scattered in a irregular form perivascularly.
4. In view of the close relationship of the oxytalan network to the vascular walls, the oxytalan fibers may participate in a form of mechanism that contribute to the regulation of vascular flow under trauma from occlusion.

Removal of pocket epithelium in humans by modified excisional new attachment procedure

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1. Modified ENAP is more effective for the elimination of pocket epithelium in score 1, 2 of sulcus bleeding index than in 3 of sulcus bleeding index.
2. In advanced gingival inflammation as in score 3 of sulcus bleeding index, reverse bevel incision is more effective for the elimination of pocket epithelium than Modified ENAP incision, but not so significantly.

A comparative clinical study on interdental denudation and interdental coadaptation

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1. After using interdental coadaptation and interdental denudation procedures, statistical difference of gingival recession was significant only at 1 week of operation.
2. The pocket depth and loss of attachment were significantly reduced in denudation procedure at all postoperative period.
3. There were no significant differences in sulcus bleeding index, plaque index, contour index and gingival recession between two procedures at 8 weeks of operation.