● 외상성 교합력이 성견 치근표면에 미치는 영향에 대한 주사 전자현미경적 연구

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저자는 성견에서 외상성 교합력이 치근표면에 미치는 영향을 관찰하기 위하여 하악 우측 제3소구치에 금관을 장착한 후 3, 7, 15, 30일 후에 발치하여 주사 전자 현미경으로 관찰한 결과 다음과 같은 결론을 얻었다.

1. 외상성 교합력을 가했을 때 3일군에서는 대조군에서와 같이 치근 표면에 변화가 나타나지 않았으며, 7일군에서부터 백악질의 흡수가 일어나기 시작하였다.
2. 외상성 교합력을 가한 기간이 길 수록 백아질 표면의 흡수면적과 흡수깊이가 증가하였으며, 7일군과 15일군에서는 흡수가 백아질층에만 한정되어 있었으나, 30일군에서는 상악질층까지 흡수가 일어났다.
3. 7일군, 15일군, 30일군의 흡수부위는 주로 치근단 1/3부위에 위치하였다.
4. 치근첨단부 흡수는 30일군에서만 나타났다.

● 치은 판막수술시 혈관수축제가 실혈량에 미치는 영향에 관한 연구

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본 실험에서 서울대학교 치주과에 내원한 환자 28명을 선택하여 치은 판막수술시 실혈량과 국소마취제내의 혈관 수축제가 미치는 영향을 조사하였다.

환자는 일반화학혈액검사, 뇨검사, 혈압, 성별, 시술부위에 포함된 치아수를 기록하고 마취제는 혈관수축제가 있는것과 없는것의 사용으로 비교관찰하였으며 이들 두방법간의 차이를 two tailed student t-test로 분석하였고 수술시간과 실혈량의 상관관계도 분석하였다.

실혈량 계산은 Spectrophotometer를 이용한 Cyanmethemoglobin용액을 선택하여 다음과 같은 결과를 얻었다.

1. 각예당 평균 실혈량은 혈관수축제가 있는 국소마취제를 사용한 경우 26.7±4.8㎖, 혈관수축제가 없는 국소마취제를 사용한 경우는 95.1±8.7㎖이었으며 이들간의 차이는 통계적으로 유의하였다. ($P<0.001$)
2. 국소마취제내 혈관수축제 사용에 관계없이 실혈량은 남녀간의 차이는 없었다.
3. 국소마취제내 혈관수축제 사용에 관계없이 상 · 하악간에는 차이가 없었다.
4. 시간이 흐를수록 실혈량은 증가된 바 국소마취제내 혈관수축제를 사용하지 않은 경우(2.26±0.90㎖)가 혈관수축제를 사용한 경우(0.96±0.23㎖)보다 단위시간당 출혈량이 많았다. ($P<0.001$)

2. In both groups, a few signs of trauma from occlusion were observed in gingiva(2.31 percent), root(0.36 percent)and cementum(0.18 percent).
3. In 60.25 percent of examined teeth, occlusal wear facets were observed.
4. There was no statistically significant difference found in response to trauma from occlusion between normal gingival group and gingivitis group.($P>0.05$).

A scanning electron microscopic study on the cementum surface after root treatment of extracted teeth

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Ten human extracted teeth with chronic periodontitis were selected to observe the cemental surfaces. All teeth were brushed in order to remove the debris from the root surface, and then each tooth was planed with the curette and etched with citric acid (pH 1.0).

After these root treatments, the specimens were fixed in 10% N-Formalin for several days, and all of the root surfaces were observed under scanning electronic microscope(JEOL JSM-35).

The results were as follows :

1. There were various deposits which could be considered as an irregular cemental projection, subgingival plaque, epithelial attachment remnants and periodontal fibers on the surface of the diseased roots.
2. The planed root surfaces were smoother and more pebbled than diseased root surfaces, but had some deposits.
3. The root surfaces after etching with citric acid had many meshed collagen fibers but there were not any other cemental projections observable.
4. Exposure of collagen fibers by acid etching of root surface is being considered for promoting the reattachment potential of periodontal fibers.

The scanning electron microscopic study of root surface following traumatic occlusion

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The purpose of this study was to observe the root surface changes following traumatic occlusion.

Five adult dogs were used, and divided into one control group and four experimental groups.

In experimental groups, high Sun Platinum casting metal crowns with 2.0mm thick were placed artificially onto the lower right third premolars to create the traumatic occlusion.

After 3, 7, 15, 30 experimental days, the specimens were examined under scanning electron microscope.

The results of this study were as follows :

1. In control and 3 day groups, no significant changes were seen on the root surface. The initial cementum resorption was observed in 7 day group.
2. The resorption area and depth were more remarkable as the trauma inposed upon continuously. In 7 day and 15 day groups, the resorptions were limited in the cementum, but the dentin resoption was occurred in 30 day group.
3. In 7, 15, 30 day groups, root resorption was areas were mainly located in the apical third.
4. In 30 day group, the root apex resorption was noticeable.

Clinical study on the effects of vasoconstrictor for the blood loss determination in periodontal flap surgery

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For the study of the effects of vasoconstrictor on the blood loss in periodontal flap surgery, 28patients who were diagnosed and planned to have a flap surgery were selected carefully using C. G. C., blood chemistry, blood pressure, sulcus bleeding index, plaque index, pocket depth and radiographic examination. Those patients were divied into two groups arbiturally by the criteria of vasoconstrictor using and non-using patients during periodontal flap surgery. Whole blood loss was measured with the method of cyanmethemoglobin determination and counted it with spectrophotometer.

For the statistical analysis, paired student t-test was used for determination on the effects of vasoconstrictor in this study.

The results obtained were summarized as followings :

1. The volume of blood loss in vasoconstrictor using group was significantly lower than that of vasoconstrictor non-using group.
   (26.7 ± 3.8 vs 95.1 ± 8.7ml, $P<0.001$)
2. There was no significant difference of blood loss between male and female in both two groups.
3. There was no significant difference of blood loss between maxillary and mandibular areas in both two groups.
4. Generally, the blood loss was gradually increased to the parallel of time elapse, and the blood loss in vasoconstrictor non-using group was sinificantly higher than that of using group per unit time.
   (2.46 ± 0.90ml vs 0.69 ± 0.23ml, $P<0.001$)