

3. 상피의 근단이동은, 대조군에서는 3주째 notch 상방부까지 상피가 이동되고 8주엔 notch의 기저부까지 완전히 도달되나, 실험군에서는 전 기간동안 상피의 근단이동이 억제되었다.
4. 신부착의 형성에 있어, 대조군에서는 8주 소견에서 notch의 기저부까지 완전히 상피가 근단 이동하여 신생 백악질의 형성이 관찰되지 않았으나, 실험군에서는 4주부터 신생 백악질이 얇게 형성되고 8주째 더 두꺼워졌으며, 16주 소견에서는 notch의 거의 전부에 신생 백악질이 형성되었으며, 그 위로는 새로이 형성된 결합조직 섬유가 수직으로 매입하고 있는 양상을 보이고, 접합상피 직하방까지 신생 백악질이 형성되는 양상이 관찰되었다.
5. 신생골의 형성은 대조군에서는 관찰되지 않았으나, 실험군의 16주 소견에서 notch의 기저부 위로 신생골이 형성된 양상이 관찰되었다.

## ● 분지부 병소의 심도에 따른 치주치료의 효과에 대한 임상적 연구

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저자는 분지부 병소를 가진 환자 74명의 168개 상·하악 제1대구치와 제2대구치를 대상으로 Lin-dhe와 Nyman<sup>18)</sup>의 수평적 분류와 Tarnow와 Fletcher<sup>22)</sup>의 수직적 분류법으로 병소를 분류하고, 그에 따라 설정된 비외과적 치료와 절제적 외과술을 시행한 후 최소 6개월, 최대 4년(평균 1.7년)간 관찰하여 다음과 같은 결론을 얻었다.

1. 분지부 병소의 분포는 I, II, III급이 상악 제1대구치와 제2대구치에서 각각 18, 7, 31개와 15, 9, 8개, 하악 제1대구치와 제2대구치는 각각 15, 9, 23개와 21, 5, 7개로서 상, 하악에 관계없이 제1대구치와 제2대구치에 비하여 발생 빈도와 심도가 높았다.
2. Hamp 등<sup>48)</sup>의 기준에 따라 11개(7%)의 치아는 초기에 발치하고, 나머지 157개 분지부병소의 치주 치료를 시행하였는데, 유지관리기간에 따른 치료 전과 치료 후 최종 검사시의 치주낭 심도와 치주조직 부착도는 각각 0.92-2.39mm의 감소, 0.19-1.20mm의 개선을 보였다.
3. 유지관리기간의 치아상실은 7개(4.5%)로서 근관치료와 관련된 6개, 치주치료의 실패에 의한 1개등 비치주적 원인에 의한 발치 증례가 월등히 많았다.

본 연구에서 사용한 분지부 병소의 분류와 그에 따른 치료술식의 설정은 다근치의 분지부 병소에 대한 보다 객관화된 치료적 접근 가능성을 제시하였다.

## ● Polytetrafluoroethylene membrane이 성견 치주조직재생에 미치는 영향

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치주질환으로 파괴된 치주조직을 재생하고 구강내 노출된 치근면에 새로운 결합조직의 결합을 얻을 목적으로 시술하는 조직유도재생술에서 Polytetrafluoroethylene membrane하방의 치주조직이 치유되는 초기양상과 이에 대한 PTFE membrane의 영향을 규명하고자 생후 6개월 이상으로 영

8, 16 week, the healing process of periodontal tissue was evaluated by light microscope.

The obtained results were as follows.

1. Inflammatory cell infiltration was severe at the 1st and 2nd week but it reduced at the 4th week both in the control and the experimental group.
2. Resorption of the Polyglactin 910(Vicryl<sup>®</sup>) mesh started from the 4th week. At the 8th week, it remained only at the apex of the root and on the bone, and at the 16th week, it was completely resorbed.
3. In the control group, the epithelial migration reached to the coronal portion of the notch at the 3rd week and reached to the apical portion of the notch at the 8th week. In the experimental group, the apical migration of epithelium was not observed at any time.
4. New cementum formation on the root was not seen in the control group, because of the complete migration of the epithelium to the level of the apical portion of the reference notch at the 8th week. In the experimental group, thin layer of the new cementum formation was observed at the 4th week, and it was thickened at the 8th week. At the 16th week, most portion of the notch was filled by new cementum and into there newly formed connective tissue fibers were perpendicularly inserted and new cementum was formed to the level of the junctional epithelium.
5. The new bone formation was not observed in the control group. In the experimental group, new bone formation from the apical portion of the defects was seen at the 16th week.

## A clinical study on the effect of periodontal therapy in cases of various degree of furcation involvements

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The present study was performed to evaluate the effect of periodontal therapy in various degree of furcation involvement of maxillary and mandibular 1st and 2nd molars during 4 years of maintenance period.

Total 168 molars of 74 patients were classified by the extent of horizontal destruction of periodontal tissue described by Lindhe and Nyman and vertical destruction described by Tarnow and Fletcher and treated by one of the following therapies after supragingival scaling and plaque control instruction ; scaling and root planing or furcation plasty in degree I , tunnel therapy, root resection, hemisection or extraction in degree II or III.

The results were as follows :

1. In both arches, 1st molar showed higher frequency distribution of furcation involvement than 2nd molar.
2. The 11 molars were extracted during initial therapy according to the criteria described by Hamp and remaining 157 teeth were treated surgically or nonsurgically. Changes in probing pocket depth and level of attachment between 6 months and 4 maintenance were the reduction of 0.92–2.39mm and the gain of 0.19–1.20mm, respectively.

3. During maintenance period, 7 teeth(4.5%) were extracted. The 1 tooth was extracted due to periodontal failure and 6 teeth were extracted due to endodontic failure.
4. The assignment of treatment modality based on the degree of furcation involvement presented here suggested the possibility of more objective approach to the treatment of furcation involvement of molar teeth.

## Effect of polytetrafluoroethylene membrane on the regeneration of periodontium in dogs

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The ultimate goal of periodontal therapy is the regeneration of the periodontium support lost to periodontitis. Guided tissue regeneration is practice for forming a new connective tissue attachment to the previously exposed root surface.

The study was in done order to determine the initial healing status of the periodontium under Polytetrafluoroethylene and the effect of the guided tissue regeneration procedure on actual regeneration.

The periodontal defects caused by periodontitis were treated by a flap operation and was followed by placing the membrane over the denuded root surface of some teeth(test teeth) in such a way that the epithium and gingival connective tissue were prevented from reaching contact with the root during healing. A second surgical procedure was performed after 6 week to remove the membrane. No membrane was placed over the root surface of the teeth and only a flap operation was grafted the operative site. Observations were taken in intervals of 4, 8, 12 weeks after the operation. Examination was done histologically using a microscope.

The results obtained were as follows

1. In the formation of new cementum which is essential for a new attachment, the best results came 4 weeks after the operation in the PTFE membrane group. In the Calcitite group it was obvious of weeks after the operation, and in the flap operation group, none was found throughout the entire experimental period.
2. The apical migration of epithelial cell was most remarkable in the flap operation group. In the Calcitite group and PTFE membrane group, it was prevented, so a normal sulcus appearance.
3. In the effect of alveolar augmentation for new bone formation, the best results were in the PTFE membrane group : it was found 12 weeks after operation. The alveolar ridge, however, did not increase in the flap operation group.
4. Signs of inflammation were slight in every group for the entire experimental period : therefore the differences between each group were hardly distinguishable.
5. For the regeneration of lost supporting periodontium, guided tissue regeneration utilizing PTFE membrane is most effective because of the new attachment and the effects of alveolar augmentation are faster, better, and more productive.