

● 클로르헥시딘 및 테트라싸이클린 치은연하치주낭세척이 만성 치주질환에 미치는 효과에 대한 연구

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chlorhexidine 및 tetracycline을 이용한 치은연하 치주낭세척이 만성 치주 질환에 미치는 효과를 실험하기 위하여 20명의 환자에게 3mm이상의 치주낭을 가진 치아를 각각 4개씩 선택하여 인접 부위 중 치주낭이 깊은 부위를 실험 부위로 설정하고 치주낭의 깊이가 3-4.5mm인 경우를 I군으로, 4.5-6mm인 경우를 II군으로 6mm이상인 경우를 III군으로 분류한 후, Water-Pik에 연결한 무딘 주사 바늘을 이용하여 0.1% chlorhexidine용액(CH군), 250mg tetracyclin/25cc 생리적 식염수(TC군), 생리적 식염수(SA군)로 치은연하세척을 1회 실시하였으며, 한 부위는 치은연하세척을 시행하지 않고 대조군(CT군)으로 하였다.

각 군마다 초진과 치석 제거술 실시 1주후(세척 전), 세척 직후, 세척 후 1, 2, 3, 4, 5, 6주에 치주낭 내 세균의 분포와 부착 상실 정도, 치은 지수, 치태 지수, 출혈 지수를 관찰, 분석하여 다음과 같은 결론을 얻었다.

1. 치은연하세척 직후 각 군 모두 운동성 세균이 감소하며 구균은 증가하는 소견을 보였으며 세척 직후 I군, II군에서는 75-85%, III군에서는 50-60%의 운동성 세균 감소율을 보였다.
2. 치은연하세척 후 운동성 세균의 비율은 I군은 세척후 3-4주에, II군은 세척 후 2-3주에, III군은 세척 후 1-2주에 세척 전 상태로 복귀되는 현상을 보였다.
3. 실험군에 있어 사용 약제에 따른 치은연하세척의 효과는 치은연하치태 세균의 구성에 있어 통계학적인 유의성이 없었다.
4. 출혈 지수는 I군, II군에 있어 CT군과 비교시 CH군, TC군, SA군에서, 1, 2주에 유의성이 있었으나($P < 0.01$), III군에서는 유의차를 보이지 않았다.
5. 치태 지수는 I군에서 CT군이 1, 2주에 유의차가 있었으나($P < 0.01$), II군, III군에서는 유의성이 없었다.
6. 부착상실정도와 치은 지수는 CT군과 비교시 CH군, TC군, SA군에서 전 실험기간에 걸쳐 유의차가 없었다.

● 초음파 치석제거기와 큐렛에 의한 치은연하 치석제거 효과의 비교 연구

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초음파 치석 제거기와 큐렛의 치석 제거 효과를 연구하기 위하여 진행된 치주염으로 진단되어 발치를 요하는 치아 87개를 발치전 임상적으로 측정된 치주낭 깊이에 따라, 큐렛과 초음파 치석 제거기로 치은연하 치석 제거를 실시한 후 이것을 실험군(큐렛 사용군, 초음파 치석 제거기 사용군)으로 하고, 치은연하 치석 제거를 실시하지 않은 군을 대조군으로 하여, stereomicroscope하에서 이들 사이의 치석 제거 효과를 비교 관찰한 결과 다음과 같은 결론을 얻었다.

1. 전치부에서 대조군의 치석 존재량은 83.2%이었는데 비하여, 큐렛 사용군의 잔존 치석량은 27.5%, 초음파 치석 제거기 사용군의 잔존 치석량은 30.5%이었다.

2. Human gingival fibroblasts were treated with sonic extract of *Bacteroides gingivalis*(126.5 μ g of protein/ml) started to change its cell morphology of spindle shape at 24 hr and as the cell incubated further more under above condition, cells were detached from the bottom of culture flask with its morphological change.
3. Growth inhibitory effect of sonic extract of *Bacteroides gingivalis*(126.5 μ g of protein/ml) on human gingival fibroblasts was reversible.
4. Growth inhibitory effect of sonic extract of *Bacteroides gingivalis*(126.5 μ g of protein/ml) on human gingival fibroblasts was unstable after heat treatment at 80°C for 30 min.

Above results suggest that sonic extract of *Bacteroides gingivalis* inhibits strongly the growth of human gingival fibroblasts and murine fibroblasts(L929) and substances which inhibit the growth were not endotoxin but heat labile substances.

The antimicrobial and clinical effects of a single subgingival irrigation of chlorhexidine and tetracycline solution in periodontal pocket

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The purpose of this study was to assess the antimicrobial effects and clinical effects of a single episode of subgingival chlorhexidine and tetracycline irrigation on the pathogenic flora in periodontal pockets and to evaluate the lasting period of this effects.

Change in the pattern of colonization within the subgingival pockets were monitored by differential dark-field microscopy, in 20 patients, over a period of 6 weeks. In addition, changes in the clinical parameters of the diseased sites were also monitored. 4-sites of pockets ≤ 3 mm were selected in each patient and divided into 3 group (group I : $3 \leq$ pocket depth < 4.5 mm, group II : $4.5 \text{mm} \leq$ pocket depth < 6 mm, group III : $6 \text{mm} \leq$ pocket depth).

These were randomly irrigated with a single dose of either 0.1% chlorhexidine (group CH), 250mg tetracycline/25cc saline (group TC), physiologic saline (group SA), while 1 site were left as control (group CT).

The results as follows :

1. A reduction in the proportion of motile bacteria and an increase in the proportion of cocci were observed with a single episode of subgingival irrigation. The motile bacteria decreased 75–85% in group I, II and 50–60% in group III.
2. The suppression of motile bacteria with a single subgingival irrigation was maintained for up to 3–4 weeks at group I, to 2–3 weeks at group II, to 1–2 weeks at group III before values started to climb back to levels before irrigation.
3. The three irrigated group did not differ significantly in proportion of bacteria in the subgingival plaque after subgingival irrigation.
4. The bleeding index showed a significant difference in group CH, TC, SA of group I, II compared with group CT ($P < 0.01$), but there was no significant difference in group III.

5. The plaque index showed a significant difference in group CH of group I compared with group CT($P < 0.01$), but there was no significant difference in group [4], III.
6. No statistical difference was showed in group CH, TC, SA compared with group CT concerning the loss of attachment and gingival index.

The comparative study of the effectiveness of ultrasonics and curette for the removal of calculus on the root surface

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The purpose of this study was to evaluate the effect of ultrasonic instrument and curette for the removal of calculus on the root surface. For this study, 87 teeth above second degree tooth mobility (anterior teeth 36, premolar 24, molar 27) were selected. Experimental groups were treated by subgingival scaling with curette and ultrasonic instrument, and control group was not treated. Measurement of remaining dental calculus was recorded according to the pocket depth with the stereomicroscope on extracted teeth.

The obtained results were as follows

1. In anterior teeth the remaining calculus on curette group were 27.5%, the remaining calculus on ultrasonic instrumented group were 30.5% the remaining calculus on control group were 83.2%
2. In posterior teeth, the remaining calculus on curette group were 31.1%, the remaining calculus on ultrasonic instrumented group were 36.0%, the remaining calculus on control group were 89.0%.
3. In the comparison of anterior teeth and posterior teeth, anterior teeth were better subgingival scaling effect than posterior teeth, but both group showed difference without statistical significance.
4. Subgingival scaling effect according to the pocket depth were decreased to 4-6mm, 7mm above, 1-3mm pocket depth.
5. In the comparison of subgingival scaling effect between curette and ultrasonic instrument on each root surfaces, both group showed difference without statistical significance.
6. Remaining calculus were observed mainly on the cemento-enamel junction, furcation area, line angle, below restorations.