

우리가 기대하는 항균효과를 가질 수 있으리라 생각된다.

최근의 연구결과 인산사포닌 중 잎과 뿌리의 껍질부분에서 얻은 추출물간에 각기 다른 효과를 가진다는 보고가 있는바 이에 대한 구명이 필요하다. 또한 많은 생약제제가 전통 한방에서 항균제로 쓰이고 있는바 이에 대한 연구가 더 필요하다고 보면 새로운 항균제제로서 생약제제가 발견되면 기존의 chlorhexidine과 혼합하여 사용하던지 혹은 몇가지 생약제제를 혼합사용하면서 방출%조절성 방법을 이용한 치주낭내 치주병인균의 제거에 크게 이용될 수 있다고 생각된다¹⁸⁾.

● 치은제거술과 치은연하 소파술의 임상적 비교 연구

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치석제거술과 치은연하 소파술후 3개월간의 치료에 대한 효과를 비교하기 위해 38명의 치주염으로 진단된 환자에서 초진시 치주낭 깊이, 부착상실, 치태지수를 측정한 뒤 치석제거술과 치은연하 소파술을 시행하였다. 초진 측정된 치주낭 깊이에 따라 치주낭 깊이가 1-3mm인 초기 치주염(I군), 치주낭 깊이가 4-6mm인 중등도 치주염(II군)으로 나누어 각군마다 치석제거술 4주후, 1개월, 3개월에 치주낭 깊이, 부착상실을 측정 분석하여 다음과 같은 결론을 얻었다.

1. I군에서 치주낭 깊이는 치석제거술에거 감소하였으나 유의성 있는 차이는 없었으며, 치은연하소파술에서 전치, 소구치, 구치에서 치석제거술 후, 1개월 3개월에 유의성 있는 감소를 보였다($P<0.01$).
2. I군에서 부착상실은 치석제거술에서는 유의성있는 차이가 없었으나 치은연하소파술에서 전치, 소구치, 구치에서 1개월, 3개월에 유의성 있는 차이를 보였다($P<0.01$).
3. I군에서 치주낭 깊이는 치석제거술에서 감소하였으며 전치에서만 유의성 있는 차이가 있었고 치은연하소파술에서는 전치, 소구치, 구치에서 치석제거술후, 1개월, 3개월에 유의성 있는 차이가 있었다($P<0.01$).
4. I군에서 부착상실은 치석제거술에서 유의성 있는 차이가 없었으나 치은연하소파술에서 전치, 소구치, 구치에서 치석제거술후, 1개월, 3개월에 유의성 있는 감소를 보였다($P<0.01$).
5. 전치, 소구치, 구치의 치아부위에 따른 치주낭 깊이와 부착상실은 유의성 있는 차이가 없었다.

● P. Gingivalis ATCC 53977의 sod유전자 절편을 이용한 P. gingivalis 381과 W50의 세균 유전자의 Southern blot hybridization

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치주질환의 주요한 원인균으로 제시되는 P. gingivalis의 superoxide dismutase(sod) gene에 대한 nucleotide sequence와 E. coli에서의 발현이 보고되었다¹⁾. 이 sod enzyme은 혐기성 세균이 P. gingivalis가 산소에 어느 정도 저항할 수 있는 능력을 부여해 주는 것으로 알려져 있다. 본 연구의 목적은

In vitro antimicrobial activity of several antiplaque agents against periodontic

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Reduction or elimination of subgingival plaque and bacteria are essential in prevention or reducing the incidence of periodontal disease. The purpose of this study is to investigate the antimicrobial activity of commercially available antimicrobial agents and several plant extracts against periodontopathic microflora. Sanguinarine, Chlorhexidine digluconate, Listerine, Myrrha, Ginseng saponin and phenoxethanol were tested of their antimicrobial effects to determine the MICs with 16 strains of periodontopathic microflora. Sanguinarine was found to completely inhibit the growth of all the bacterial strains at the concentration of 3.75µg/ml.

Chlorhexidine was found to inhibit 16 strains of oral microflora at or below the concentration of 16µg/ml. Listerine was showed their inhibitory effect at the concentration of 30–500µg/ml. Myrrha was revealed their antimicrobial effect at the concentration of 780–12500µg/ml. Antimicrobial effect of Sanguinarine and chlorhexidine were stronger than those of Myrrha and Ginseng saponin.

Although, Myrrha and Ginseng saponin were less effective than those of commercially available antimicrobial were highly considerable to investigate on their possibility to utilize on the antimicrobial agents.

A comparative clinical study of the scaling and subgingival curettage

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The purpose of this study was to evaluate the clinical effect over 3 months following scaling and subgingival curettage. This study was carried out on 38 individuals with periodontitis. The subjects were separated into two groups on the basis of initial pocket depth. These were consists of group I (pocket depth 1–3mm), group II (pocket depth 4–6mm).

Probing depth loss of attachment were recorded on baseline, 4 weeks after scaling and 1, 3 month after treatments. All data were analyzed statistically.

The results were as follows.

1. For group I, there was decrease in pocket depth after scaling, but this decrease was not statistically significant, and there was not statistically significant, and there was statistically significant decreases after subgingival curettage.
2. For group I, there was not statistically significant decrease in loss of attachment after scaling, and there was statistically significant decrease after subgingival curettage.
3. For group II, there was decrease in pocket depth after scaling, and there was statistically significant decrease after subgingival curettage.
4. For group II, there was not statistically significant decrease in loss of attachment after scaling,

and there was statistically significant decrease after subgingival curettage.

5. There was not statistically significant difference in pocket depth and loss of attachment related to tooth type (anterior, bicuspids, molars).

Southern hybridization of bacterial DNA of porphyromonas gingivalis 381 and W50 with a sod gene fragment from porphyromonas gingivalis ATCC 53977

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Southern hybridization of bacterial DNA of *P. gingivalis* 381 and W50 was done with a 0.45-kb Bgl II Ecor I fragment of *P. gingivalis* ATCC 53977. The 0.45-kb fragment was prepared from either sod gene or recombinant DNA subcloned into plasmid pUC19. Bacterial DNA of *P. gingivalis* 381 and W50 was prepared and digested with Pst. I. 1.0% agarose gel electrophoresis was done and the DNA was transferred into nitrocellulose membrane. The 0.45-kb DNA fragment was used as a DNA probe for southern hybridization. Random primer labelling and non-radioactive detection system were used to detect the hybridized DNA fragment.

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Superoxide dismutase activity in mutant E. coli transformed with sod gene from porphyromonas gingivalis ATCC 53977

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The sod gene coding for Mn/Fe-dependent superoxide dismutase (sod) enzyme has been isolated on a 5.9-kb DNA fragment from *Porphyromonas gingivalis* ATCC 53977. Superoxide dismutase activity can be expressed from *P. gingivalis* DNA fragment and from subcloned fragment in *E. coli*. The expression of sod activity was evident when a Pst I-Hind III fragment was subcloned into plasmid vector pUC19 indicating that the expression was through the lac Z' promoter which is in the same orientation with the direction of the fragment encoding sod enzyme.

The sod activity was determined as an unit calculated by the reciprocal of the amount of protein/mg bacteria required for 50% inhibition of superoxide synthesis in xanthine/xanthine oxidase assay method. The activity was inhibited by the addition of 1mM H₂O₂ and significantly enhanced by the addition of 0.2mM Fe⁺⁺ and 0.12mM Mn⁺⁺ showing that the superoxide dismutase is Mn/Fe-dependent.

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