

3. 탐침깊이가 깊을수록 methyl mercaptan의 농도가 높게 나타났으며 유의성이 인정되었다($P > 0.001$).
4. 통계학적 유의성은 없었지만, 치태지수가 높을 수록 methyl mercaptan의 농도가 높아지는 경향을 보였다($P > 0.1$).

● Aromatic retinoid(Ro 10-9359)가 백서 악하선암에 미치는 영향에 관한 실험적 연구

우건희 · 권배근 · 신형식
원광대학교 치과대학 치주학교실

저자는 비타민 A의 유도체인 aromatic retinoid(Ro 10-9359)가 DMBA(9, 10-dimethyl-1, 2-benzanthracene)에 유도된 백서 악하선암에 미치는 영향을 관찰하기 위하여 실험1군에 DMBA분말4~6mg을 1회 매입하고, 2군 17, 18주에는 두유에 용해한 aromatic retinoid를 체중 1kg당 1일 200mg을 주3회 경구투여하여 대조군과 비교하여 8, 10, 12, 16, 17, 18주 기간별로 병리조직학적으로 관찰하여 다음과 같은 결론을 얻었다.

1. DMBA매입군은 이형성의 상피가 피복되는 낭종을 형성하여 8주에 상피내암을 나타내고 10주부터 침윤증식하여 12주에 잘 분화된 편평상피세포암을 유발시켰고 기간이 경과함에 따라 분화도가 낮아져 17, 18주에는 미분화 편평상피세포암을 유발시켰다.
2. DMBA 미입후 AR투여군(2군)은 17, 18주에서 1군에 비하여 육안적으로 종물의 크기가 다소 감소되었다.
3. AR 투여군(2군)의 17주에서 조직학적으로 DMBA매입군에 비해 각화 형성이 감소되었으며 많은 괴사현상을 관찰하였다.
4. AR투여군의 18주에서 1군보다 괴사 내지 자가용해 현상이 결체조직에서부터 심부근육층에까지 일어났으며 심한 염증세포침윤이 관찰되었다.
5. PAS염색에서 상피내암의 표피층에 양성반응을 보이는 것이 기간이 경과하여 분화도가 낮아짐에 따라 음성반응을 보였다.
6. Van Gieson염색에서는 종양이 증식하는 간질에서 교원섬유가 적색으로 염색되고 AR투여로 괴사된 조직에서는 무구조로 염색되지 않았다.

이상과 같은 소견으로 retinoid투여로 DMBA로 유발시킨 백서 악하선암 조직에서 억제효과를 가지며 종양억제가 일어나는 것은 각질형성의 감소와 주로 괴사로 인해 종양세포가 소실되며 세포성면역증진때문일 것으로 사료된다.

● 치석제거 및 치근활택술후 치은연하 치태세균의 경시적 변화에 관한 연구

유부영 · 이만섭 · 권영혁
경희대학교 치과대학 치주과학교실

경희대학교 치과대학에 재학중인 학생중 치주낭 깊이 3mm정도를 갖는 학생 17명을 대상으로

A study on the relationship between the severity of periodontal disease and the concentration of methyl mercaptan

Mi Hyang Yeom, Kyung Yoon Han

Dept. of Periodontology, College of Dentistry, Chosun University

To determine the relationship between the severity of periodontal disease and the concentration of methyl mercaptan, thirty-six patients(19 male, 17 female) with periodontitis who should be treated by periodontal surgical treatment in all teeth of upper and lower jaw, thirty patients(11 male, 19 female) with fixed orthodontic appliance and twenty-three dental students(13 male, 10 female) with the good oral and general health were selected.

First, the concentration of methyl mercaptan was measured by B.BChecker(OH 724 TYPE, Tokuyama Soda Co., Japan), and differences of the concentration of methyl mercaptan among three groups and change of that following periodontal treatment in periodontitis group were statistically analyzed by Student t-test, and the correlation between the concentration of methyl mercaptan and plaque index and the probing depth was statistically analyzed by Regression

the following results were obtained :

1. The concentration of methyl mercaptan in the periodontitis group was significantly higher than that in the orthodontic group and the normal group($P < 0.001$), but there was no significant difference between the orthodontic group and the normal group.
2. After scaling and surgical periodontal treatment in the periodontitis group, the concentration of methyl mercaptan was markedly reduced($P < 0.001$).
3. The deeper probing depth, the higher concentration of methyl mercaptan was($P < 0.001$).
4. Even though there was no significant correlation statistically, there was the tendency of increase in concentration of methyl mercaptan with greater plaque index($P < 0.1$).

The effects of aromatic retinoid on the chemical carcinogenesis of the submandibular glands in rats

Gun Hee Woo, Bae Keun Kwon, Hyung Shik Shin

Dept. of Periodontology, College of Dentistry, Wonkwang University

The purpose of this study was to evaluate the effects of Retinoid(Ro 10-9359) on the carcinogenesis induced by implantation of 9, 10-dimethyl-1, 2-benzanthracene(DMBA) on the submandibular gland in rats.

Forty-six male rats of Sprague-Dawley were divided into three groups. Group 1(24 animals) were implanted with 4~6mg pellet of powdered DMBA in exposed submandibular glands. Group 2(16 animals) were treated by the same methods as Group 1, and supplied with AR in soy bean milk as a vehicle at 17th and 18th week(200mg/kg/day/3times weekly). Group 3(6 animals) were untreated.

All animals were sacrificed at 8th, 10th, 12th, 16th, 17th, and 18th week after experiments, submandibular gland were removed, and then fixed in the 10% formalin, sectioned in paraffin and stained

with the Hematoxylin-Eosin, Van Gieson and Periodic Acid Schiff, and then histopathologic change were obtained.

The results were as follows :

1. DMBA implantation(group 1) showed epidermal cyst with dysplasia, carcinoma in situ at 8th week, early invasive squamous cell carcinoma at 10th week, well differentiated squamous cell carcinoma at 12th week, moderately differentiated squamous cell carcinoma at 16th weeks, and poorly differentiated squamous cell carcinoma at 17th week.
2. AR treated group(group 2) showed a little regression of tumor size at 17th, 18th week were more than those in group 1.
3. AR treated group showed reduction of keratin formation, and severe necrosis at 17th week.
4. AR treated group showed necrosis or autolysis which involves from connective tissue to deep muscle layer and severe inflammatory cell infiltration were more than those in group 1 at 18th week.
5. In PAS stain, there were positive reaction in epidermal layer at carcinoma in situ but negative at necrotic tissue of AR treated group.
6. In Van Gieson stain, collagen fibers showed positive reaction at stroma of proliferating tumor in group 1, but negative at necrotic tissue of group 2.

In summary, retinoid exhibited a regressive effect on DMBA induced carcinoma of submandibular gland in rats. The mechanism of effect of retinoid may be associated with extensive autolysis or necrosis at the tumors, with the great loss of keratin, and increased of cellular immunity.

The study of the effect on subgingival microbial composition after a scaling and root planing

Bu Young Yu, Man Sup Lee, Young Hyuk Kwon

Dept. of Periodontology, School of Dentistry, Kyung Hee University

The purpose of this study was to determine the morphologic distribution of subgingival plaque bacteria and correlations between clinical parameters and bacterial distributions following a single full mouth scaling & root planing session.

Seventeen patients(14males, 3females)were selected for this study. Plaque Index, Sulcular Bleeding Index, and Pocket Depth were measured on all tooth surfaces. And microbial samples were collected from selected tooth surfaces and examined with a phase-contrast microscope to classify them into 4morphotypes before therapy : cocci, spirochetes, motile and others.

After therapy, clinical parameter and microbial distribution were examined again on 3, 7, 14, 28, 42, 56, 90day intervals. The data were analyzed by Student's t-test & pearson correlation coefficient.

The result were as follows :

1. PI, SBI scores tended to decrease rapidly in day 3 following debridement($P < 0.001$), thereafter gradually returning to baseline levels around 14th, 28th day respectively.
2. Mean PD recordings reached a significantly lower value on the 7th day($P < 0.001$)and remained