

반면, B립프구가 국소적으로 양성반응을 보였다.

4. 국소유년형치주염의 치은조직에서는 조직학적으로 다른 질환군에서 보다 염증세포의 침윤이 적게 나타났으며, T립프구도 중등도의 염색반응을 보였다.
5. NK세포는 모든 질환군에서 음성반응을 보였다.

● 수종의 치주병인균에 대한 항생제 감수성 및 β -lactamase생산에 관한 연구

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치주질환의 치료에 보조요법으로써 적절한 화학요법제를 선택하기 위하여 급속 진행형 치주염 환자 32명의 치은연하 치태에서 분리한 *Fusobacterium nucleatum*, *Eikenella corrodens*, *Wolinella recta*, *Porphyromonas gingivalis*, *Prevotella intermedius*, *Actinobacillus actinomycetemcomitans*에 대한 11종류 항생제의 감수성을 한천 평판회석법으로 검사하고, 상기 세균의 β -lactamase생산유무를 판정하여 다음과 같은 결과를 얻었다.

1. *Fusobacterium nucleatum*은 penicillin G와 polymyxin B에 대하여 높은 감수성을 보였으며, metronidazole에서 가장 낮은 감수성을 보였다.
2. *Fusobacterium nucleatum*은 penicillin G와 polymyxin B에 대하여 높은 감수성을 보였으며, metronidazole, phosphomycin, polymyxin B에 대해서는 감수성이 매우 낮았다.
3. *Eikenella recta*에서는 minocycline과 augmentin에 대해서 높은 감수성을 보였고, phosphomycin, metronidazole, polymyxin B에 대해서는 낮은 감수성을 보였다.
4. *Porphyromonas gingivalis*는 metronidazole을 제외한 검사된 모든 항생제에 대해서 높은 감수성을 보였으며, 특히 ampicillin, minocycline 및 augmentin에 민감하였다.
5. *Prevotella intermedius*는 minocycline, augmentin, cephalothin에 대해서 감수성이 높았으며, phosphomycin, metronidazole, polymyxin B, 및 cephalosporin call 대해서는 6 *Actinobacillus actinomycetem-comitans*는 ampicillin, pericillm G, cephalothin에 대해서는 높은 감수성을 나타내었으나, phosphomycin, metronidazole, polymyxin B에서는 낮은 감수성을 보였다.
7. 검사된 전체 균주에 대한 검사 결과는 penicillin G와, augmentin, ampicillin에 대해서는 높은 감수성을 보였으나, metronidazole, phosphomycin 및 polymyxin B에 대해서는 매우 낮은 감수성을 보였다.
8. β -lactamase assay결과, 단지 *Wolinella recta*의 한 균주에서만 β -lactamase생산이 확인되었다. 상기와 같이 한국인 급속진행형 치주염 치료시 보조적 치료제로서 적절한 항생제 선택을 위한 연구 결과 penicillin G, ampicillin, augmentin, minocycline 및 doxycycline이 치태내 혐기성 세균 성장 억제에 상당한 효과가 있을 것으로 기대되며, 앞으로 위의 항생제가 보다 효율적으로 치은열구내에서 그 효능을 발휘할 수 있는 방법 및 그 내성균에 대한 대처방안이 규명되어야 할 것으로 사료된다.

An immunohistochemical study on the distribution and activity of lymphocytes in the periodontal lesions

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This study was performed to determine the distribution and activity of T lymphocyte, B lymphocyte and NK cells in the inflamed gingiva and connective tissue of periodontal lesion. Gingival tissue were obtained from 30 patients with healthy, gingivitis, adult periodontitis, rapidly progressive periodontitis, and localized juvenile periodontitis.

These tissue were processed for H-E staining and immunohistochemical study with monoclonal antibody.

Following results were obtained

1. In the lesion of gingivitis, T lymphocytes showed highly positive response in the area beneath the epithelium.
2. In the lesion of adult periodontitis, T lymphocytes were stained highly diffused beneath the epithelium cell.
3. In the lesion of rapidly progressive periodontitis, T lymphocytes were stained slightly than other diseased, and B lymphocytes showed locally positive reaction.
4. In the lesion of localized juvenile periodontitis, it showed slight infiltration of inflammatory cell histologically, compared to other disease.
5. NK cell were not stained all periodontal lesion.

Antibiotic susceptibility and β -lactamase producibility of periodontopathic microorganisms isolated from rapidly progressive periodontitis patients

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The purpose of this study was to study and choose the useful antibiotics in the treatment of periodontitis.

Susceptible periodontopathic bacteria species, such as *Fusobacterium nucleatum*, *Eikenella corrodens*, *Wollinella recta*, *Bacteroides gingivalis*, *Bacteroides intermedius* and *Actinobacillus actinomyces-comitans* were obtained from the subgingival plaque of 25 patients diagnosed as rapidly progressive periodontitis.

The susceptibility of above bacterial species to various antibiotics was tested through the inoculation of that to Trypticase blood agar with antibiotics and cultured.

Also, β -lactamase producibility was evaluated from the above bacteria species by the color change of Cefinase disk.

The result as follows :

1. *Fusobacterium nucleatum* (n=48) was highly susceptible to penicillin G and polymyxin B, but not to metronidazole.
2. *Eikenella corrodens* (n=48) was highly susceptible to minocycline and augmentin, but low susceptible to metronidazole, phosphomycin, polymyxin B.
3. *Wolinella recta* (n=48) was highly susceptible to minocycline and augmentin, but resistant to phosphomycin, metronidazole, polymyxin B.
4. *Porphyromonas gingivalis* (n=8) was highly susceptible to almost antibiotics, especially to ampicillin, minocycline and augmentin, but resistant to metronidazole.
5. *Prevotella intermedius* (n=36) was highly susceptible to minocycline, augmentin and cephalothin, but very resistant to phosphomycin, metronidazole, polymyxin B and Cephalosporin C.
6. *Actinobacillus actinomycetemcomitans* (n=48) was susceptible to ampicillin, penicillin G and cephalothin, but very resistant to phosphomycin, metronidazole and polymyxin B.
7. All the bacterial species tested was highly susceptible to penicillin G, augmentin, ampicillin comparatively, but resistant to metronidazole, phosphomycin, polymyxin B and cephalosporin C.
8. In β -lactamase assay, only one species of *Wolinella recta* showed the production of β -lactamase.

As mentioned above, in results of the experiment for proper antibiotic agent selection, as supplemental therapeutic agents for rapidly progressive periodontitis of Korean, penicillin G, ampicillin, augmentin, minocycline and doxycycline are considerably effective for regression of anaerobic bacterial growth in dental plaque.

In future, confronted problem of above antibiotics in that development of program for own-effect-exhibiting method in gingival sulcus and proper plan for resistant groups are necessary.

In vitro effect of epidermal growth factor on the regulation of lymphocyte function

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Epidermal growth factor(EGF), single-chain polypeptid(MW 6045) has been known as potent extra-cellular regulator of biological responses in a wide variety of cell types. However, little has been reported about the role of EGF in the regulation of lymphocyte-function. Moreover, the mechanisms of EGF-action on immune system has not yet been elucidated.

The purpose of this study was to investigate on the in vitro effect of EGF on proliferation of T and B lymphocytes, the production of cytokines and Ig, and some mechanisms responsible for its regulating effect on lymphocyte-functions.

Monocytes, CD 4⁺, CD 8⁺ and lymphocytes was isolated from the peripheral mononucleus cell of healthy person, their proliferation, differentiation and the production of cytokine and Ig by EGF was measured. Also, the effect of cell, prostaglandin E₂, IFN- γ and some interleukin(IL) on the proliferation, differentiation and the production of cytokine and Ig by EGF measured. Also, the effect of