3週以降では、退行性変化が強い部分に TUNEL 陽性細胞がより多くなる傾向がみられた。

Apoptosis of condylar in antigen-induced arthritis of the rabbit temporomandibular joint

Yuriko Hirota, Manabu Habu, Kazuhiro Tominaga, Miho Sukedai and Jinichi Fukuda (First Department of Oral and Maxillofacial Surgery, Kyusyu Dental College)

The aim of this study was to investigate the relationship between the changes of condylar cartilage and apoptosis in antigen-induced arthritis model of the rabbit temporomandibular joint. Twenty adult male New Zealand White rabbits were used in this study. Unilateral arthritis was induced with intra-articular injection of ovalbumin. Each four animals were sacrificed at 1, 3, 7, 21, and 42 days after the induction of arthritis. Apoptosis of the mandibular condyle was observed by TUNEL method. Although little morphological change of condylar cartilage was observed in the late acute phase arthritic joint, a larger number of TUNEL positive chondrocytes were observed in the arthritic joint than in sham induced joint. In the chronic stage of arthritis, TUNEL positive cells were close to the area of cartilage degradation.

P-9. 毛の微細構造からみたイタチ科5種の類縁関係

○吉田希代子・荒井 秋晴

九歯大・中央研

哺乳類の毛の微細構造により、種あるいは属レベルでの類縁関係をある程度把握することができる。今回イタチ科5種、テン *Martes melampus*, クロテン *Martes zibellina*, ニホンイタチ *Mustela itatsi*, チョウセンイタチ *Mustela sibirica*, アナグマ *Meles meles* について検討した。観察には、双眼実体顕微鏡 (OLYMPUS) と電界放出形走査電子顕微鏡 (日立 S-4300) を用いた。アナグマを除く4種には類似点が多く、とくに類縁関係に近いテン属の2種間とイタチ属の2種間でその傾向が強かった。しかし、キューティクルの形状、隔壁と隔壁の構造、網目 (糸状) 構造や顆粒の状況などにより4種を区別することは可能であった。アナグマは、髄質の大きさや枝毛の状況などから、イタチ科よりむしろ偶蹄目のイノシシの毛に似た構造を示した。

Relationship among the five species of mustelidae in ultrastructure of hair.

Kiyoko Yoshida and Shusei Arai (General Laboratory Center, Kyushu Dental College)

Relationship among the five species (*Martes melampus*, *Martes zibellina*, *Mustela itatsi*, *Mustela sibirica* and *Meles meles*) of family mustelidae, carnivore, was studied in the morphology and ultrastructure of hair observed by the binocular (OLYMPUS) and the scanning electron microscope of field emission type (HITACHI S-4300). Four species except *M. meles* had many resemblances. This tendency was especially strong between two species of genus *Martes* and of *Mustela*. Four species were, however, sorted in the cuticular patterns and the structure of medulla, partitions, compartments and so on. Hair of *M. meles* was similar to one of *Sus scrofa* of family suidae, artiodactyla, in the size of medulla and the split hair.

P-10. Metabotropic glutamate receptor group II のラット味蕾における発現

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九歯大・口解2

ラット味蕾においては mGluR1, taste-mGluR4 の味毛部位での発現が認められている。しかしながらグループ II に属する mGluR2 および mGluR3 の発現およびその局在に関しては全く明らかになっていない。そこで本研究ではラット味蕾における両受容体の発現の分析および局在の検索を行った。RT-PCR 法によりラット有郭乳頭における mGluR2 および mGluR3 の発現が認められた。次に両受容体を認識する抗体を用いた免疫組織化学的手法により、味蕾を構成する一部の細胞および味蕾下部の固有層の神経線維での両受容体の局在が認められた。味蕾の一部の細胞において mGluR2 または mGluR3 の発現が認められたことから、これらの受容体の味蕾における神経伝達調節への関与が推察された。

Expression of metabotropic glutamate receptor group II in rat taste buds.

Takashi Toyono, Shinji Kataoka, Yuji Seta and Kuniaki Toyoshima (Second Department of Oral Anatomy, Kyushu Dental College)

mGluR1 and taste-mGluR4 are expressed in taste tissues as a putative umami (glutamate) taste receptor. However the expression patterns of group II mGluRS (mGluR2 and mGluR3) in rat taste tissues have not been revealed. We examined the expression patterns of mGluR2 and mGluR3 in rat gustatory tissues. RT-PCR assay showed that mGluR2 and mGluR3 mRNAs expressed in circumvallate papillae. In cryosections of fungiform, foliate and circumvallate papillae, the antibody against mGluR2/3 gave labeling of the subset of taste bud cells and nerve fibers below taste lingual epithelium. These results show that mGluR2 and mGluR3 may function as receptors for glutamate to neuromodulation in rat taste buds.

P-11. ネバメーターを用いた唾液曳糸性の測定結果と他の唾液物性の関連について

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¹九歯大・予歯, ²九歯大・微生物

唾液曳糸性測定器ネバメーターを口腔乾燥症の新しい診断機器として臨床へ応用する目的で、工業界において頻用されているポリアクリル酸ナトリウムを用いて、測定値の精度と再現性を調査した。また、安静時唾液の曳糸性と粘性の関連について調査を行った。調査の結果、ネバメーターはポリアクリル酸ナトリウムの曳糸性を濃度依存的に検出し、測定値の再現性も十分であった。また、安静時唾液の曳糸性と粘性は正の相関関係を示した。ネバメーターによる唾液曳糸性の測定はチェアサイドにおいて客観的かつ簡便に行うことができ、口腔乾燥症の診断に応用できる可能性が示唆された。

Results of measuring the salivary spinability by NEVA METER and relationship between the spinability and other physical properties

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The purpose of this study is to evaluate a validation of the NEVA METER and to measure the spinability of saliva as well as viscosity, which is another property in resting saliva. We evaluated the reproducibility of spinability by using polyvinyl alcohol as a standard solution. Resting saliva from 146 subjects (range: 25-69yr, average: 39yr) were collected and the relationship between spinability and viscosity was investigated. The spinability of polyvinyl alcohol increased along with its concentration. Spinability of resting saliva showed a positive correlation with viscosity at a shear rate of 306 s⁻¹ (r=0.65, P<0.05). It was suggested that spinability of saliva measured by the NEVA METER could be added into a novel diagnostic criterion for dry mouth.