Pan CK , CK 4, CK 5, CK 7, CK 8, Ki-67 於退化性牙釉上皮細胞之表現

中文摘要

背景與目的：

臨床上常發現含齒囊腫發生於顎骨阻生第三大臼齒位置，而含齒囊腫之內襯上皮來源於退化性牙釉上皮。本研究之目的在觀察阻生智齒牙冠周圍齒濾泡之組織學表現和探討退化性牙釉上皮細胞之特性，並以此解釋齒濾泡和退化性牙釉上皮和含齒囊腫形成之相關性。

材料與方法：

本研究之材料取自 57 例阻生臼齒牙冠周圍之齒濾泡組織。利用一般組織學之 H&E 染色，觀察齒濾泡之組織學表現。利用免疫組織化學染色和 pan CK、CK 4、CK 5、CK 7、CK 8 和 Ki-67 抗體，來探討退化性牙釉上皮細胞之特性。並利用 PAS 染色觀察退化性牙釉上皮細胞是否含有肝醣或中性黏多糖。

結果：

由一般組織學 H&E 染色切片觀察，發現大部分退化性牙釉上皮爲多層鱗狀上皮，僅偶而可見單層高柱狀上皮，齒濾泡結締組織中常見水腫、出血、鬱血及慢性發炎細胞浸潤。由免疫組織化學染色，發現退化性牙釉上皮呈 pan CK 強陽性反應，CK 5 弱陽性反應，CK 4、CK 7、CK 8 和 Ki-67 呈陰性染色。由 PAS 染色，發現退化性牙釉上皮中不含肝醣及中性黏多糖。

結論：

退化性牙釉上皮不具非角化多層鱗狀上皮（因 CK 4 爲陰性）和單層柱狀上皮（因 CK 7 和 CK 8 爲陰性）之特性，但具有少量基底細胞之特性（因 CK 5 爲弱陽性）。其細胞大部分不處於細胞增殖狀態（因 Ki-67 爲陰性），且其細胞不含肝醣，表示細胞之代謝活動力不強。由退化性牙釉上皮細胞之特性，無法有足夠之証據說明含齒囊腫之形成和退化性牙釉上皮之增殖有直接相關。齒濾泡組織中常見發炎、水腫等現象，但組織發炎是否和囊腫形成有直接相關，尚待更進一步之實驗証明。

英文摘要

Background and purposes: Dentigerous cysts occur most frequently in the impacted third molar areas of the jawbone. The lining epithelium of the dentigerous cyst is originated from the reduced enamel epithelium. The purposes of this study were to examine the histological features of dental follicles around the impacted molars, to investigate the characteristic features of reduced enamel epithelial cells, and to assess the relationship between the reduced enamel epithelium and the pathogenesis of the

dentigerous cyst.
Materials and methods: The study group included 57 specimens of dental follicular tissues excised from tissues around the impacted molars. The tissue sections were prepared by routine histological procedures. The histological features of dental follicles were studied by examining the hematoxylin & eosin-stained slides. In addition, immunohistochemical staining with anti-pan CK, -CK 4, -CK 5, -CK 7, -CK 8 and -Ki-67 antibodies was used to investigate the characteristic features of reduced enamel epithelial cells. PAS stain was used to observe whether there was the presence of glycogen or neutral mucopolysaccharide in the reduced enamel epithelial cells.
Results: Most of the dental follicular tissues had reduced enamel epithelium of stratified squamous type on their inner surface. The dental follicular tissues were occasionally lined by a single layer of high columnar epithelium on their inner surface. Edema, hemorrhage, congestion and a chronic inflammatory cell infiltrate were often found in the connective tissue of dental follicles. By immunohistochemistry, we found that the reduced enamel epithelial cells were strongly positive for pan CK, weakly positive for CK 5, and negative for CK 4, CK 7, CK 8 and KI-67. By PAS stain, we also discovered that the reduced enamel epithelial cells did not contain glycogen or neutral mucopolysaccharide.
Conclusions: We conclude that the reduced enamel epithelial cells do not have characteristic features of non-keratinized stratified squamous epithelium (CK 4-negative), of simple columnar epithelium (CK 7- and CK 8-negative), and of cells with proliferation ability (Ki-67-negative). Furthermore, they are not metabolically active cells (glycogen-negative). There is no direct evidence to support an intimate relationship between the reduced enamel epithelium and the pathogenesis of the dentigerous cyst. A chronic inflammatory cell infiltrate and edema are frequently observed in the connective tissue of the dental follicles. However, further studies are needed to evaluate whether there are evidences to support a direct association between the chronic inflammation and the pathogenesis of the dentigerous cyst.
Keywords: Reduced enamel epithelium, Cytokeratin, immunohistochemistry, dental follicles.