



Accurate diagnosis for endodontic treatment

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Teeth among various parts in human body, possess unique configuration compared to other organ. Among the teeth structure, the pulp is a soft tissue originating from mesodermal tissue which consists of the highly differentiated preodontoblastic cell layer in vicinity, and is in direct contact with dentin matrix, the tooth's hard tissue. The close relationship of these preodontoblasts and dentin can be a reason for regarding the dentin and pulp as a functional entity consisting of different components, as they are often referred as 'pulp-dentin complex'. Pulp has a unique characteristic of being surrounded by firmly mineralized dentin. Due to this environment the increased volume of inflamed pulp causes the increase in tissue pressure, as the pulp is unable to be relatively constricted while the tissue pressure rises during vasodilatation.

Although pulp is similar in many aspects to other bodily connective tissues, good consideration should be given to the characteristic that only the pulp possess. Mature pulp is similar to the viviparous connective tissue, and therefore it has relatively abundant stem cells. Pulp is composed of nerve, vessel, connective tissue fiber, basal material, interstitial fluid, preodontoblast, fibroblast, immunoactive cells and lots of tissue factors including other cell components and etc.

Many studies reported that there is no significant correlation between the clinical sign, symptom and truly existing histological matter. Because, the suspected tissue in fact cannot be removed for the histological examination, clinical classification has been developed for selection of the treatment plan. Most generally, objective and subjective impressions are used to classify the suspected disease, and these are classified as specific terms that refer to the existence healthy or unhealthy tissue. These resulting classification is usefully used to decide whether to carry out the endodontic treatment.

In this lecture, I would like to closely examine the relations through several clinical cases, based on histopathological and clinical views related to the diagnosis of tooth's unique pulp tissue and apical lesion.



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