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METHODS OF ASSESSING PULP VIABILITY

Alfraganus University, Faculty of Medicine,
Dentistry Department, Group 203 Student:
Uzaqov Abdulaziz Nazirjon o'g'li
1abdulazizuzaqov@gmail.com
+99891773-27-77

Abstract

One of the biggest diagnostic problems in clinical practice is an accurate assessment of the condition of the pulp.This can be further complicated in Pediatric Dentistry,where the practitioner is faced with young children with a developing tooth,damaged teeth, or a limited ability to remember the history of pain for the tooth in question.There are different approaches to pulp testing, and there may be confusion over their validity or appropriateness in different clinical cases.

Keywords; sensitivity test,viability test, (EOD) Electroodontometry, (LDF)Laser Doppler floumetry

Dental pulp-settles in the tooth cavity and root canals.There are crown and root parts of the pulp.The dental pulp is made up of blood vessels,nerves and lymph vessels.The functions of dental pulp are as follows:

Traffic function

Protective function

Plastic function

Clinical significance

Dental pulp examination methods are used to determine the health of the dental pulp.The diagnostic data obtained as a result of the tests are used in combination with Anamnesis,clinical and radiological data to determine the diagnosis and prognosis of treatment.

The study of dental pulp has the following objectives:

- diagnosis of endodontic pathology
- localization of toothache
- difference between odontogenic and nonontogenic pain
- assessment of the condition of the pulp after tooth damage
- establishing pulp health before prosthetics.

Tests can be done by stimulating sensitive fibers inside the pulp (sensitivity test) or by evaluating the blood flow to the pulp (vitality test). It is reported that all available methods have limitations in terms of accuracy and repeatability and therefore require careful interpretation in clinical practice

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Electroodontometry

Electroodontometry (EOD) is widely used in modern medicine.The pulp, in comparison with dental tissues, is saturated with water (4-5% water), which makes it the most greenish conductor of electrical current in the tooth. Professor L. R. According to Rubin's works, sensitive points are located on the teeth, from which irritation occurs at the lowest current strength.On the front teeth, these points are located in the middle of the cutting edge, and on the chewing teeth on the top of the hill.At these points, the reaction of the teeth varies within a radius of 2 to 6 mA.Any other indicators below or above this level can be considered a pathology.In older people,a decrease in excitability can be observed (due to age-related changes, most often in molars). In this case, attention should be paid to buccal in premolars and buccal - medial tuberculosis in molars. EOD is achieved by applying a conductive agent (e.g. toothpaste) to a pre-dried tooth and placing the tip of an electrical pulp Examiner probe on the tooth surface closest to the pulp Horn. The patient must then extend the tip of the Conducting Probe to complete the contour and agree to let it go when he feels carincal.The use of this type of test is undesirable for patients with pacemakers. Care should be taken when applying an electric pulp test on a tooth adjacent to metal restorations, as they can create electrical conductivity and give Noto GRA negative results.

Laser Doppler floumetry (LDF) method

A tooth-oriented laser beam follows the path of the dentin tubules to the pulp.Laser radiation is transmitted through the light probe to the tooth or gums. The radiation emitted by erythrocytes moving in the microcirculatory channel undergoes a change in frequency (Doppler effect) in proportion to their speed of movement. Radiation reflected from red blood cells enters the analyzer through the rupture tube for further processing. At the output of the device, an analog signal is generated in the probed area proportional to the value of the perfusion of the gon current.

- Special programs allow you to recycle LDF grams and calculate microgemodynamic parameters.

- Pulse oximetry

-This method uses the difference in the absorption of red and infrared light by oxygenated and deoxygenated erythrocytes in the circulation to determine the degree of oxygen saturation (Sa02).

- Two-wave spectrophotometry

-The use of two-wavelength light installs the contents inside the pulp chamber.

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