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Therapy of Tooth Decay and Gingivitis Using a Multi-Wavelength Halogen Lamp

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Abstract
The effect of a halogen lamp with multiple wavelengths was studied on the shrinkage of the number and size of infected organ cells in the gum areas and carious holes in the teeth. Various tests were conducted using a halogen lamp (500 watts) for time periods ranging from (0.5 - 1) hour, intermittent and with variable wavelength, with control In the frequency and intensity of the light used. Tests were conducted on a group of 170 cases, and the results were 90% successful regarding the treatment of caries and molars. From the practical results, we find it possible to use the technique of reducing the number and size of affected organ cells to treat many different diseases. Toothache is still treated when necessary by extracting the tooth, but the side effects are serious and may lead to a stroke, especially if the person with the tooth suffers from atherosclerosis due to the connection of blood vessels between the nervous system, the face and the heart. Nerve removal as an alternative treatment for tooth extraction leads to almost the same complications as removing some of the vessels. As for molar fillings, as a third alternative, it is also dangerous, for reasons including that the filling contains a toxic substance in one form or another. As for our treatment, it is a fourth and successful alternative.

INTRODUCTION

(The visible spectrum (or sometimes called the optical spectrum) is the part of the electromagnetic spectrum, which is visible (detectable by the human eye). The electromagnetic spectrum in this range of wavelengths is called visible light or simply light. The typical human eye responds to wavelengths in air About 380 to 750 nanometers.[1] The corresponding wavelengths in water and other media are reduced by a factor equal to the refractive index. In terms of frequency, this range of the electromagnetic spectrum corresponds to 400-790 terahertz. The eye is most sensitive to light at a wavelength of about 555 nm (540 Hz), in the green region of the light spectrum. By no means does the spectrum include all the colors that the human eye and brain can distinguish. Unsaturated colors such as pink, purple, and crimson do not exist, for example, because they are only produced by mixing several Wavelengths.
Wavelengths visible to the eye also pass through the "optical window", which is the area of the electromagnetic spectrum that largely passes through the Earth's atmosphere (although blue light is scattered more than red light, which is The reason why the sky is blue). Human eye response is determined by subjective testing (see CIE), but atmospheric windows are determined by physical measurements. It is electromagnetic waves represented by light waves consisting of the seven colors of the spectrum: red, orange, yellow, green, blue, violet, and indigo. Each of these waves has a specific wavelength that differs from the other, and the speed of these waves is the same as the speed of

electromagnetic waves, equal to 300,000 km/s. These waves travel in straight lines and can travel in a vacuum and in any transparent or semi-transparent medium.

Light can be defined as electromagnetic radiation that carries the same characteristics as waves, which can be divided into several beams depending on their wavelength. One of the most prominent characteristics that distinguish visible light is its interaction with tangible materials, and many sub-characteristics fall under this heading. We mention the following:[1] 0 seconds of 0 secondsVolume 0% Reflection and refraction of light. Scattering of light. Light absorption. Polarity of light. Visible light is represented by a group of wavelengths ranging from 380 nanometers to 780 nanometers, and the strength range of cosmic rays ranges between 10 to the power of negative eight and 10 to the power of negative 4, while gamma rays range in strength to 10 to the power of negative 2. As for As for small waves (microwaves), their strength ranges up to 10 to the power of positive eight, and as for radio waves, their strength ranges between 10 to the power of positive 10, between 10 to the power of positive 12, and 10 to the power of positive 14, and finally radio waves. Long radio waves have a range of strengths between 10 to the power of 16 and 10 to the power of 18.

Visible light varies from many sources, including light reflected from the sun, aurora borealis, meteorites, lightning, and fire, and it can also be obtained from some organisms that have bioluminescence, such as fireflies, jellyfish, and microbes.

Artificial lights, such as candles, oil lamps, gas lighting, electric lamps, fluorescent lamps, LED lamps and lasers, are useful light sources.

Lasers are single-length beams of light that are used in many fields, such as music storage, examinations, and surgery. Lasers are also used to measure heights.

Colors differ from each other due to the difference in the wavelength of each color. The visible spectrum consists of many colors, including violet, blue, green, yellow, orange, and red. Red is divided into two shades, including bright red and dark red.

The wavelength range of the visible spectrum is from 340 nm to 750 nm, and near ultraviolet light is found in the range of 340 to 400 nm and the naked eye is unable to see it.

Violet color consists of wavelengths of approximately 400 to 430 nanometers, while blue color has a wavelength of 430 to 500 nanometers, and green color ranges from 500 to 570 nanometers.

Colors from yellow to orange reach between 570 and 620 nanometers, light red reaches between 620 and 670 nanometers, and dark red reaches between 670 and 750 nanometers.

As for near-infrared light, its length is more than 750 nanometers, and because it exceeds 1100 nanometers, it cannot be seen with the eye, but if you want to see infrared light.

With an infrared camera that can capture light heat signatures at sunset, you will see different colors than the colors you see when the sky is bright.

MATERIAL AND METHODS

In order to protect the tissues covering the roots of the teeth, the gums and mucous layer of the mouth are coated with a special gelatinous liquid that prevents chemicals and light from reaching the living tissues, and thus the effect of light and chemical compounds is limited to the teeth only. It is expected that this technique will be widely accepted by those who suffer from yellowing of the teeth and color changes in their outer layer, such as the yellowish brown color, which occurs after taking some anti-inflammatory drugs such as tetracycline. Experiments have shown that most patients do not need more than an hour for the required caries process to take place.

The stages of treating caries are simple and harmless. First, the mouth is washed with a substance that protects against light and chemicals. After that, the person is given a red liquid to rinse the mouth with. The liquid is composed of 35 percent hydrogen peroxide. Then the area to be affected by caries is exposed to light that can It should be of high energy to clean very yellow teeth, or of low energy to treat sensitive teeth. The light from the device appears light green, as it shines on each tooth for 60 seconds. The light raises the temperature of hydrogen peroxide to 128 degrees Fahrenheit, which is the temperature required to speed up the teeth cleaning process by stimulating chemical reactions.

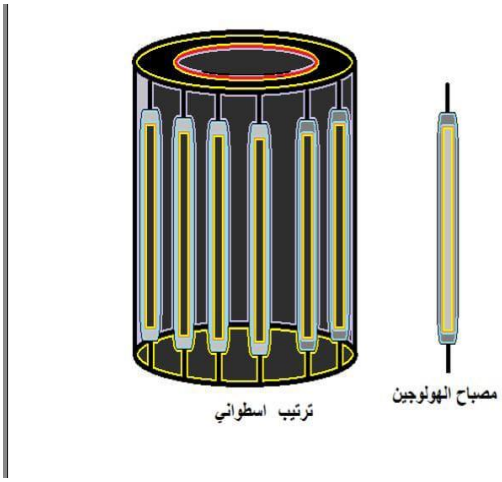

Fig (1): Halogen lamp parts

Teeth discoloration occurs as a result of many reasons, the most important of which are smoking, medications such as tetracycline, and some types of foods and drinks, such as coffee and red wine, in addition to lack of oral and dental care, especially in the evening. If the mouth is not cleaned before sleeping, oral germs and bacteria become active during the night due to the low or no rate of saliva secretion, and thus there is no resistance to fighting the germs that feed on food residues found between the teeth and in areas of caries.

There are a group of factors that stimulate the deposition of yellow-colored layers of “plaque,” an example of which is vitamin C, which is largely present in lemons.

Fig (2): Factory halogen lamp

The aforementioned photosystem helps or incites oxidation reactions, which take place more efficiently and quickly than in normal cases, and after disintegration and oxidation occur, the dark areas appear lighter due to the bounce of light from the surface of the teeth, because the remaining parts of the plaque absorb a smaller amount of light, so they show a special shine. Although the area is not completely cleaned of sediment. Yuri Kit, one of the contributors to this innovation, said that raising the temperature of hydrogen peroxide helps get rid of small precipitated particles, and that the heat increases the effectiveness of hydrogen by 100 percent, and the color that the compound takes (red) and the color of the rays (green) are An important role in the decay process because they are located in opposite directions in the light spectrum, and therefore the chemical reaction is stronger. To obtain the highest effect, dentists should apply the cleaning liquid and highlight it three times for each tooth in each session. This means that the time period each person needs may reach approximately 60 minutes, but the results are often good within one session.

RESULTS AND DISCUSSION

This method is safe and there is no fear that it will cause damage to the tooth pulp or the nerves and blood vessels, because the effect of light rays and chemical reactions is limited to the surface of the tooth only. Also, the surface temperature is not high and does not exceed the temperature of a cup of regular hot tea, so there is no effect on the living tissue surrounding the tooth and sensitivity or other side effects rarely occur.

Try this method for the first time in Britain. The use of this treatment method is new in Britain and some doctors have only been using it for a short time. So far, the results are good, as an improvement in the intensity of tooth shine is three times better than it was before treatment. Duren said that the only problem currently is the cost of this treatment, as it has reached 300 pounds in some centers, but in the future the prices could become reasonable.

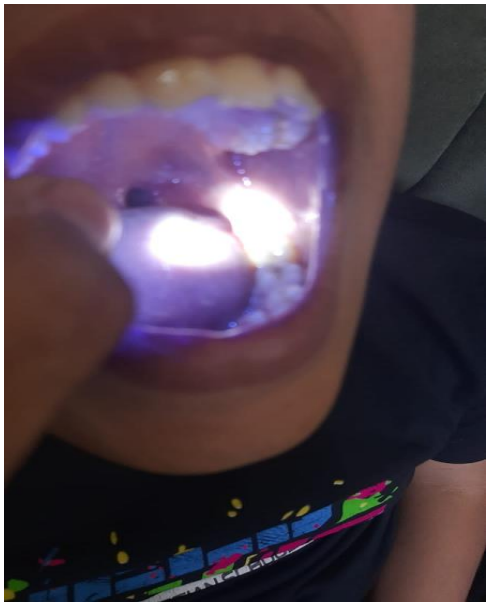

Fig (3): Dental treatment with halogen lamp

The photoelectric phenomenon or the photoelectric effect is a phenomenon that occurs as a result of solid, liquid, and gaseous bodies releasing electrons when they begin to absorb the substance derived

from light. It is also known as the phenomenon of metal surfaces releasing electrons when exposed to electromagnetic waves or light rays. Examples of these phenomena are: thermal emission, secondary emission, And electrophoresis, and photoelectricity.

The photoelectric phenomenon: The discovery of this phenomenon goes back to the year 1877 AD by the scientist Hertz and Halvachs, who noticed that electric sparks were easily generated when a surface of a conductive material was exposed to an ultraviolet ray. However, it was officially announced in 1900 AD by the scientist Lenard, and by the year 1905 AD it was The scientist Einstein refuted this photoelectric phenomenon, presenting a research paper that included an explanation of the practical results of the phenomenon. He said that the energy of light is accumulated in the form of quanta of energy known as photons. This discovery left a great impact, including a revolution in the science of quantum physics. Accordingly, the latter won the Nobel Prize. in physics in 1921 AD according to his interpretation of the photoelectric effect. How does a photoelectric phenomenon occur? The photoelectric phenomenon occurs when electromagnetic rays are emitted over a metal surface, which results in the liberation of the electrons on the surface. This occurs as a result of part of the electromagnetic rays absorbing the electron attached to the metal, which is liberated from it by giving it kinetic energy. For the phenomenon to occur depends on a number of variables, which are: Frequency of electromagnetic radiation. The intensity of the electromagnetic beam. The resulting photocurrent. The kinetic energy of an electron released from a metal surface. Metal type. The photoelectric effect requires the presence of photons with a neutral energy equal to about 1 MeV in elements with a large atomic number. It is noteworthy that this phenomenon is of great importance in revealing and closely understanding the quantum nature of light and electrons. Characteristics of the photoelectric phenomenon: The phenomenon occurs if the frequency value of the incident waves is greater than the frequency of what is known as the threshold frequency, which is the light frequency that is the lowest enough to send electrons off the surface of the metal without giving them kinetic energy. The phenomenon occurs as soon as electromagnetic waves of the appropriate frequency fall on a surface, regardless of the intensity of the waves. The phenomenon is based on the number of electrons emitted from the cathode surface towards the intensity of the incident light. That is, the intensity of the transient current in the photoelectric cell circuit increases as soon as the intensity of the incident light increases. The kinetic energy of the emitted electrons is directly related to the frequency of the incident light. If the maximum value of the first increases, the second increases.

CONCLUSIONS

Our treatment consists of inserting a light branch, i.e. a skewed light tube, at its end to facilitate its entry into the mouth, in order to project it vertically onto the perforated tooth. In such a case, the photons falling from the branch would bombard, as I see it, the weak nerve cells made up of semi-permanent particles when they are small, and then they cause absorption and disappear. The weakened cells, while causing photoreproduction of the healthy cells adjacent to the weakened ones, thus compensating for the lost ones and repairing the nerve again. The disease, as we see, comes from the cells not performing their function, which means that they are not cohesive inside, which facilitates their expulsion and then absorption. With this treatment, we preserve the blood vessels from During nerve preservation, the appropriate light for bombarding cells is visible light with a light intensity that falls between red and ultraviolet rays, which has a frequency of 10 to 14. The frequency range is capable of moderate

penetration, and beware of high frequencies such as X-rays, the penetration of which is usually destructive.

As it destroys even intact ones to some extent due to its high frequency, the rate of its destruction of weak ones is greater than its reproduction of healthy ones. The aforementioned cloning gains its validity experimentally from successful applications within mathematical and statistical tables by shining halogen, LED, sunlight, or laser light on protein materials and other materials for varying periods of time as well. In this research by Dr. Nagham, the success rate through clinical follow-up of those suffering from toothache was close to 100. All that was required was to project the LED light vertically or any other light with the same frequency mentioned through a light branch. We are now in the process of obtaining a patent for it and we have obtained a license from the Ministry. Iraqi Health for its medical use. Note that it is possible to shine the light of the mobile phone with the aforementioned frequency, even if it is difficult to insert it into the mouth. Shining the light on the perforated tooth for a quarter of an hour and only once is enough to remove the pain once and for all.

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