



The Helpful Role of Low-Level Laser Therapy in Removing the AIDS Virus

Ehsan K*

Arak University of Medical Sciences, Iran

*Corresponding author: Dr. Ehsan Kamani, Phd Health Research Methodology and BS laser, Arak University of Medical Sciences, Iran; Email: kamaniehsan313@gmail.com

Editorial

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Editorial

Laser is meant to amplify light by induction emission, and it can be briefly stated that some materials can absorb the radiation energy and then radiate it into the light when this occurs naturally in the atom. Speech is called spontaneous emission, and what you know in nature as light is the result of spontaneous emission [1]. Laser treatment is one of the non-invasive treatments. The current medical world needs these treatments because they prevent the effects of invasive treatments. Meanwhile, laser science has advanced very well due to the properties of laser beams. One of the branches of laser is low power laser therapy. Low-power laser therapy is a treatment that uses low-intensity light radiation in the range of 830 - 540 nm. The therapeutic effects of this method appear to be due to photochemical reactions that alter the permeability of the cell membrane and subsequently increase the rate of mRNA and cell proliferation. Following the irradiation of laser photons into the cell, the cellular response begins with the activation of photoseptors in the respiratory chain located in the mitochondria, thereby altering the cellular redox and altering the cell membrane modification by calcium transfer and pH changes and activation. cAMP and DNA duplication lead to protein synthesis. In this way, cellular responses are drawn from the cellular surface to the tissue and organ surface and have effects such as anti-inflammatory, anti-edema and swelling, painlessness, cell proliferation, neovascularization and acceleration of repair, metabolic shift to aerobic and balancing the immune system. It comes from.

In general, the physiological response of tissue for low-power lasers includes the following: biological system

stimulation, effect on the immune system, anti-inflammatory and anti-edematous effect, effect on blood vessels and circulation, effect on lymph, effect on wound healing, analgesic effect and effect on nerves [2]. The Blue Laser The blue laser has very positive effects on our immune system. Furthermore, wound healing is improved significantly. There is also a strong anti-inflammatory and anti-bacterial effect as well as positive influence on hormone harmonization and pain reduction. It improves cell perfusion and oxygen uptake. The biochemical mechanisms are quite complex. However, there is an improvement of ATP metabolism (leading to more cell energy) and positive influence on hemoglobin nitric oxide (HbNO) release after blue laser blood irradiation.

- Stimulates complex I of the mitochondrial respiratory chain (NADH-dehydrogenase complex).
- It has very strong anti-bacterial effects by destroying micro-organisms of all kinds in the blood (by absorption of bacterial porphyrins and by production of reactive oxygen species).
- Releases NO from the NO-Hb of micro circulation (Nitric Oxide).
- Can be used for photodynamic tumor therapy in combination with Curcumin as photosensitizer.
- Can be used for anti-microbial photodynamic therapy (for bacterial, viral and parasitic diseases) in combination with Riboflavin as photosensitizer [3].

Laser and Virus. Fatma Vatansever Together with their research team in the year 2013 they came to this conclusion by testing on viruses and pathogens UVC, blue light, PDI have been shown to be effective in inactivating pathogens without harm [4]. Research on the use of lasers in viral mortality is not widespread, but with a few studies, the effectiveness of laser blue light and LEDs in eliminating the

virus can now be studied. Diem ThoHo, with his research team studying 400 nm blue light, concluded that the results of this study provide the first evidence that 405-nm LED light has antiviral activity [5]. Blue laser light of different wavelengths has been reported to have positive effects on our immune system. It can be used for anti-microbial photodynamic therapy (for bacterial, viral, and parasitic diseases). 6 Based on past studies and the effectiveness of low-power laser light, we can use venous laser light in this method intravenously, but it should be noted that using blue light in a venous form is more cautious. Therefore, in the use of this method such factors as age, gender, weight, specific disease, and laser duration should be considered so that we could do this properly.

The wavelength used will be 405 nanometers with the power of 1.5 to 2 milliwatts, which should not exceed the mentioned power due to the high energy of this wavelength, and the duration of laser radiation, according to the factors, should be from 10 to 20 minutes in 15 sessions. In addition to the blue laser, red light radiation with a wavelength of 650 nm with a power range of 100 to 200 milliwatts should be irradiated continuously both intravenously and locally on several points of the body. The purpose of this work will be to reduce the complications of the AIDS virus and also to prevent the reproduction and destruction of live viruses. The treatment process of two lasers does not interfere, and by taking two wavelengths, we reduce the rate of recurrence of the AIDS virus. Finally, the laser causes more lymphocytes, especially T, to multiply, and the number of T lymphocytes obtained with the help of the laser is several times more

resistant than normal lymphocytes, so a resistant defense barrier is formed.

Then, with the blue laser light, we will prevent the proliferation of the cells and break their cellular connection, and finally, we will clean the body with a treatment process without complications using low energy lasers.

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