

## IPL evaluation based on harmonization Therapy

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Harmonization therapy is an approach to pursuing the long-term health of the skin comprehensively by performing a balance of cosmetic medical devices, external medicines, medicines, skin care, and life guidance. It resembles the process of a gardener growing the soil that is the basis for blooming beautiful roses, and then giving nutrients and water to the roots of the roses. Even if you apply vitamin C cream to the petals to make the flower beautiful, you cannot transform the whole flower itself more beautifully. In cosmetic medicine, as well, in order to create beautiful and vital skin, treatment is needed for the entire skin, not partially. Particularly, in treatment with cosmetic devices, it is the key to increase the strength of the patient's own tissue's recovery by applying a load heat or shock waves to the skin and using the wound healing power.

That is, by organizing the biological system from the inside of the body first, then the therapeutic effect by the beauty device can be maximized. In this article, we will explain the theory and clinical experience of harmonization therapy in combination with Intense Pulsed Light (IPL) equipment in this hospital, along with clinical cases.

### <Harmonization therapy that enhances the healing power of the skin>

#### ・ Harmonization Therapy Theory

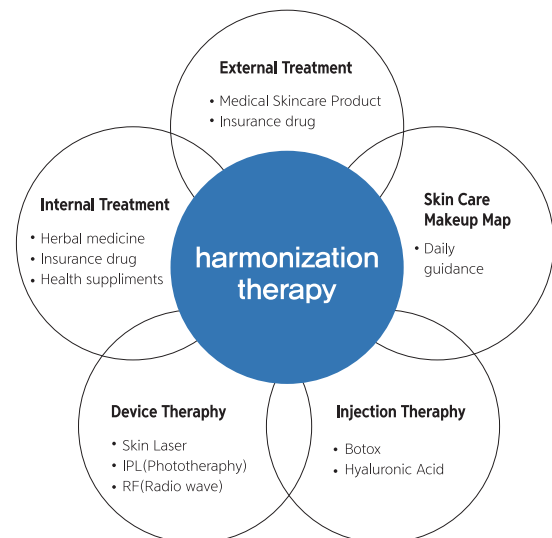
The skin is the largest organ in the human body, reaching about 16% of the body weight. Since the condition of the skin reflects the health and nutritional status of the body organs, it is important not only to access the partial area but also to observe the health of the whole body and properly improve it in order to make healthy

and beautiful skin. Considering the principle of "promote remodeling by using heat or shock wave damage and wound healing power" that many of cosmetic medical device have the healing power and recovery power of the patient's own tissue after injury are crucial. It must be an important factor in determining the effective therapeutic effect.

That is, even if the target tissue could be aggressively destroyed by heating by high-power laser irradiation or ultrasonic irradiation, the ideal remodeling effect cannot be expected if the patient's Self-healing system does not support this. On the contrary, if the patient's Self-healing system is high, the natural healing power of the skin can be induced even with mild stimulation and damage, and a sufficient remodeling effect can be seen.

Harmonization therapy is a complex treatment that improves the skin's original wound healing power

Reference: Nomoto Mayumi clinic Ginza homepage



[Image 1.] harmonization therapy

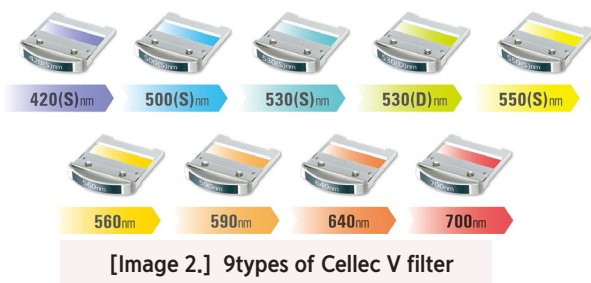
to increase the responsiveness to cosmetic medical devices, that is, the "wound-wound healing-remodeling process". Specifically, it aims to obtain a synergistic effect with cosmetic medical devices by introducing the internal medicine, external medicine, skin care, dietary guidance, etc. to maximize the power that the skin turns over from the basement membrane to the stratum corneum.

### About the IPL treatment device 'Cellec V'

In this hospital, we have been introduced the Intense Pulsed Light (IPL) device called 'Cellec V' from Jeisys Medical (South Korea) as a treatment device that meets the principle of harmonization therapy also which has obtained Japanese medical device manufacturing and sales certification in 2019.

Cellec V is a treatment device that uses light with a wide wavelength of 420~1200nm, excluding harmful ultraviolet rays. By exchanging 9 types of filters, the optimal wavelength can be selected, and arbitrary parameters can be set (Figure 2). Equipped with dual filters that show high absorbance for both oxyhemoglobin and methemoglobin, it is an equipment that can obtain excellent treatment effects for vascular lesions as well as existing pigmented lesions.

In addition, it can be applied in a variety of ways, from prophylactic treatment for acne bacteria using a short wavelength filter to hair loss treatment using a long wavelength filter. Also, it is designed to enable faster and safer treatment by providing contact cooling on the skin contact surface.



### - Practice of harmonization therapy

Harmonization therapy mainly consists of two treatment

stages. Step ① Skin activation and step ② Stimulation through IPL.

Step ① In Activation of the skin, apply external medicine and skin care from about 3 weeks before IPL irradiation to induce skin turnover. For areas with pigmentation such as spots, hydroquinone and vitamin A derivatives (tretinoin)-containing external drugs or vitamin C-containing creams are prescribed, and a home care program using medical skin care products and cosmetics handled by this hospital is also carried out. This skincare program, which started in the United States, activates glaze cells in the skin and induces an increase in dermal collagen or elastin, which promotes skin turnover and helps dermal angiogenesis, thereby increasing treatment responsiveness to the procedure.

Furthermore, if there is a disease that impairs the tissue recovery ability of the skin, such as gastrointestinal failure, internal medical treatment through herbal or western medicine is also performed. In addition, it is important to stop applying external drugs and medical skin care products for 3 days immediately before the procedure to calm the skin.

Step ② In IPL Stimulation, the filter is replaced and irradiated according to the patient's skin concerns. Since the selection of the filter and the setting of the parameters are determined according to the skin color or skin condition of each patient, it is difficult to present them in a unified method, but the treatment policy and representative treatment examples in this hospital are introduced below.

### <Case>

#### 1. Senile pigment spots

Irradiating in P-Facial mode using the filter of Cellec V560 or 590. Make the state where the redness is slightly visible on the face as the endpoint and irradiate 2 passes as if overlapping.

In the state of having pain or redness, there are individual differences, so be cautious. On the other hand, if there is no redness on the face, the effect of treatment cannot be expected much in many cases.

Therefore, the irradiation output should be appropriately adjusted.

In addition to that, it is also effective to irradiate the pigment spots with weak reaction in the entire irradiation with overlapping points.

▶ **Aged pigment spot case ①**

- Female in her 60s
- Overall irradiation: 560 filters, 20~21J
- Point: 560 filter, 23 to 24J
- Number of irradiation: 3 times



Before

After

▶ **Aged pigment spot case ②**

- Female in her 40s
- Overall irradiation: 560 filters, 20J
- Point: 560 filter, 23J
- Number of irradiation: 1 time



Before

After

## 2. Spots

Conduct irradiation in Melasma mode using the filter of Cellec V590 or 640. In the case of spots, it is important not to irradiate too aggressively, and the degree to

which the spots react slightly is set as the endpoint. Point irradiation is effective for areas where senile pigment spots appear on the spot. However, at this hospital, we do not recommend IPL-only treatment to patients with melasma, but approach melasma through combination with internal or external drugs (no case image)

## 3. Rosacea

Rosacea is coming along with a decrease in epidermal barrier function in most cases. Therefore, first anti-inflammatory in the body is carried out with meal guidance or herbal medicine. In Cellec V, vascular treatment is first performed in Rosacea mode using a 530(D) filter as a standard treatment for redness. However, for atopic dermatitis, the 530(D) filter may be too irritating, so a long wavelength of 590 or more is often selected. In type 2 (palate pustular type), a wavelength of 700 nm, which is effective for atrophy of the follicular system, is also used. In addition, if the skin has a lot of blemishes or dullness, the first treatment may be irradiated with Melasma mode using a 590 filter.

▶ **Rosacea case**

- Female in her 40s
- Overall Irradiation: 530(D) filter, 15~16J  
Triple pulse (2.8/2.8/2.8) ms
- Point: 700 filter, 25~26J  
Single pulse 20ms (center of face)
- Number of Irradiation: 2 times



Before

After

## 4. flushing

Standard treatment is performed with a 530(D) filter,

which is a facial telangiectasia mode, and a 530(S) filter is superimposed on the area where capillaries of shallow blood vessels are expanded depending on the skin, and point irradiation is performed. It is recommended to select a 500(S) filter for white and a 550(S) filter for black. In addition, if the skin has a lot of blemishes or dullness, the first time may be irradiated with the Melasma mode of the 590 filter. I think it is important to collect enough heat in the dermis to treat redness. The skin's redness after treatment is immediately checked to see if the skin's reaction has been sufficiently elicited from the body. The number of shots per person per hour reaches 250-300.

► **flushing case**

- Female in her 50s
- Full irradiations: 530(D) filter, 15-17J  
Triple pulse (2.8/2.8/2.8) ms
- Number of irradiations: 4 times



**5. Acne**

Use Acne mode. A 530(D) filter is used to irradiate the entire face, and a 700 filter is superimposed on the center of the face centered on the T zone where the sebaceous glands are concentrated to tighten the follicular glands. In addition, it is possible to improve redness by performing point irradiation on active acne or acne marks again using a 530 (D) filter.

► **Acne vulgaris case**

- Female in her 40s
- Overall irradiations: 530(D) filter, 17~18J  
Triple pulse (2.8/2.8/2.8) ms
- Overall irradiations: 700 filters, 28J  
Single pulse 20ms (T zone, center of face)

- Point: 530(D) filter, 20~21J  
Single pulse 8.8 ms (acne, acne marks)
- Number of irradiations: 5 times



**<Consideration and Summary>**

IPL devices that include a wide wavelength range are excellent in ordering the entire skin evenly. For each pigment, short-wavelength rays have high absorbance of melanin and are excellent in removing brown to black pigments such as spots, while wavelength light reaching the capillary region has ability to improve vascular diseases such as Rosacea and redness of the face. In addition, for each skin layer, it is possible to access melanin-based lesions in the upper layer and hemoglobin-based lesions in the lower layer at the same time separated by the dermal papillary layer. The dermal papillary layer, which is rich in capillaries, is also referred to as the "element of wound healing," and heating targeting this layer promotes structural remodeling. It is also possible to solve problems such as pore expansion, which cannot be improved with previous external therapy, by atrophying of the hair follicle system. The biggest advantage of the IPL device is that it can be accessed all at the same time to such as red submeter, brown to black system, and follicular system with the IPL device alone. And the effect can be maximized through the process of activation included in harmonization therapy.

Harmonization therapy introduced by this hospital is a different approach from combination therapy. Combination treatment can be said to be an aggressive method of treating multiple laser devices on the same day, and this method also has an aspect of increasing

the economic burden and skin burden on the patient as the number of devices used increases. I think that the principle of harmonization therapy that comprehensively improves the skin by focusing on the skin's original wound healing process is appropriate for the Japanese, who have sensitive skin and a conservative tendency for cosmetic medicine. Based on skin activation through home care, which is called 'daily care', it is considered as a key factor to obtain maximum therapeutic effect and results when combined with mild irradiation or thermal stimulation by IPL device as 'extraordinary care'.

Since Cellec V has a smaller head and superior operability compared to other IPL devices, it is also possible to irradiate fine structures such as around the nose. In our hospital, 3~4 types of filters are used for each part in a single treatment, and the filter can be easily replaced, which relieves the burden on both the patient and for the doctors. As the actual case shows, the treatment results are good and the patient's satisfaction with the treatment is high.

In harmonization therapy, since patient education on skin care programs and life guidance are also provided throughout the entire treatment process, it is not only a temporary effect, but an effect that raises awareness of lifelong skin health and anti-aging can also be expected. Important thing is that the skin that has become beautiful inside the body through improvement of food or lifestyle habits gives off a different beauty from skin that is only being suppressed symptoms only with external drugs or treatments. As the skin is also referred to as a "mirror that reflects the state of health", it gives realization that it is necessary to have internal health in order to properly exert the therapeutic effect of the device.

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