VOLNEWMER: Advanced Monopolar RF With Water Cooling System

HUMAN DERMATOLOGY CLINIC JI WON GYE

Special Advertisement
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Expansion of the monopolar RF markets

Currently, the energy source for lifting or improving tightness is largely divided into RF (radiofrequency) and ultrasound. RF devices that use various polarities and RFs have been released in the past few years. Moreover, RF devices can implement various types of skin rejuvenation by delivering the intended amount of energy to different layers of the skin using the conversion of current and tissue-specific resistance into thermal energy using impedance. Specifically, they have an advantage over high intensity focused ultrasound (HIFU) devices using ultrasound, which is another energy source, in terms of dermal bulk heating, and are used for improving wrinkles and skin laxity. Among different polarities of RF, monopolar RF mostly uses a low frequency of 6.78 MHz, thereby allowing deep penetration of RF, compared with bipolar RF devices, and delivering high energy to the dermis with less effect on the fat layer. The skin surface is maintained at around 40 °C using cooling to reduce pain and burn risk, and a known skin tightening effect of 4 to 6 months occurs by inducing regeneration after collagen shrinkage by heating the dermis to 50–60 °C. Also, compared with other devices, it has almost no recovery time, and the treatment effect can be maintained with repetition. Although individual differences may be present in skin aging, findings such as sagging, wrinkles, and skin laxity can be commonly found in middle-aged patients. As this device can be used for patients whose symptoms cannot be improved with HIFU-based devices alone, it has high utility, and several companies have recently released RF devices to reflect this trend.

A newcomer on the scene – monopolar RF, what are the features of VOLNEWMER?

VOLNEWMER is a monopolar RF device released by Classys in October 2022. “ThermageTM” and “OligioTM,” using the same principle, have already been released. Although VOLNEWMER is a late-comer on the scene, it is a result of several years of development, as product disclosure was made in 2019. In fact, when I first came across it for testing, my impression was that a lot of effort has gone into intuitive user interface (UI) (Fig. 1) and design, compared with that of other devices. Since existing monopolar RF devices using the frequency of 6.78 MHz are already well known, I will explain by focusing on the basic features and differences of VOLNEWMER.

Fig. 1. VONEWMER exterior and UI

The most remarkable feature of the VOLNEWMER is the surface cooling method. Surface cooling, by nature, plays the role of reducing pain and the risk of burns by maintaining a skin temperature of 40 °C. While existing monopolar RF devices from other companies use gas cooling systems, VOLNEWMER uses water cooling; this is because water cooling allows for smoother heat delivery with less pain by cooling to a constant temperature, thereby being safer than transient gas cooling. No position-dependent difference exists in cooling despite the water cooling method in which the water circulates, and no burden of replacement is present due to the lack of cooling gas. Indeed, one might question the new cooling method when so many users are used to the potent gas cooling method, but no difference is evidently present from existing methods, as no problems were found in the official safety test, and no complaints from patients or side effects during actual use, such as burns, were present.

Also, tilting technology (Fig. 2) was used primarily for the connecting part of the tip and the handpiece for maximal contact between the handpiece and the skin. The contact surface for the tip and the skin protrudes, and care was taken to prevent side effects, such as burns, and for efficient RF delivery by preventing RF from being focused around angled edges as that in existing devices using hidden edges. VOLNEWMER can have four different tips depending on the tip surface area, including V (4.0 cm², face/body) / F (3.0 cm², face) / S (16 cm², body) / I (0.25 cm², periorbital area). VOLNEWMER can be used on the neck/eye area, knees, and back of the hand, all areas that are difficult to localize or have close contact. However, because of the protruding surface, pressure must be controlled around areas with fillers. Additional cooling allows manipulation from step 1 (20 °C) to step 5 (12 °C) using the quick (Q)-cooling system, and discomfort such as heat/pain during the procedure can be mitigated by a markedly smoother vibration system, compared with those of existing devices. Although no repeat mode exists for the procedure rate, it is expected to be introduced, and face procedure is possible with easy mode settings. Tip cost, which has the biggest effect on the overall cost of the procedure for monopolar RF devices, is relatively reasonable. Since no time lock exists, shot numbers can be adjusted along with the unit price, and it can be used in combination with other devices.

Procedure protocol and combination therapy

As with other monopolar RF devices, the target patient for the procedure includes a wide range of ages, but it is most effective for mild to moderate skin laxity without significant fat and wrinkles. Rather than a dramatic one-time change, repeated procedures are recommended. For the face, the V or F tip is used starting at level 2.0 or 2.5. I usually overlap 20–30% of the shots using at least 300 REPs (start at level 1.0, additional 300 REPs when the neck is included). After performing 2 initial uniform passes, I focus on the lower face to mid-face to the temple along the anti-sagging vector to improve the jaw line. Rather than having a fixed alignment, I tend to focus on the lower face or areas with severely low elasticity/fine wrinkles, adjusting the level depending on how well the patient can tolerate the pain. The endpoint is when there is slight redness or heat after the procedure. For sensitive areas such as around the eyes, I start with a

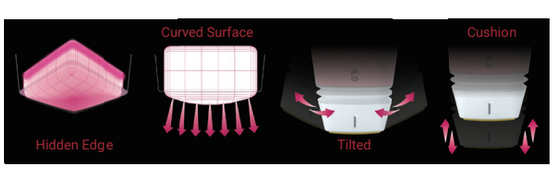

Fig. 2. VOLNEWMER tip improvements

Fig. 3. Before and after procedure on the lower face

tip level of 1.5–2.0 and perform at least 200 REPs in total (Fig. 3, 4).

Although dependent on the progress and extent of aging, when sagging of the eyes such as that in the jowl is visible, I combine with HIFU (i.e., shrink universe) to treat all layers of the skin, and I use skin booters or fillers or botulinum toxin procedures wherever necessary. The procedure takes place from the shallow layer to the deep layer; HIFU is first irradiated, followed by VOLNEWMER, and is finished with Botox or skin booster.

CONCLUSION

Monopolar RF devices are verified effective devices without recovery times for anti-aging procedures. VOLNEWMER has all the advantages of monopolar RF devices with added improvements such as well-crafted intuitive UI and safety applied to the tip. The novel water cooling method is a valuable addition. Fast, safe procedures are now possible, and patients have high satisfaction with a reasonable procedural cost, which is the advantage of a domestic product. Furthermore, this allows for periodic long-term treatment plans. A well-weaved marketing structure can be used based on the device called “shrink” from Classys on top of the advantage of the monopolar RF device. Therefore, we predict that a synergistic effect will be seen in terms of promotion and anti-aging procedures in combination with HIFU. Improvements in VOLNEWMER and new findings are believed to be catalysts in the development of non-invasive aesthetic devices including monopolar RF devices. I hope there will be lots of feedback, as it is widely used as an effective treatment tool.

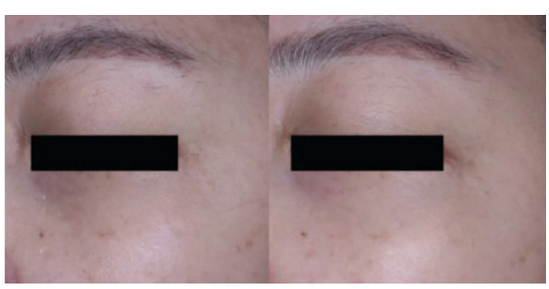

Fig. 4. Before and after procedure on the eye area

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