



# IADVL SIG LASERS AND AESTHETICS NEWSLETTER (IADVL ACADEMY)

*Editor*  
Dr. Gulhima Arora

## IADVL SIG LASERS AND AESTHETICS

E-Newsletter

Issue 01, August 2018

### Co-ordinator

Dr. Swapnil Shah



### Convener

Dr. Gulhima Arora



### Members

Dr. A. Selvam  
Dr. Abhay Talathi  
Dr. Abhishek De  
Dr. Ankur Talwar  
Dr. Anuj Pall  
Dr. B. Devani  
Dr. David Pudukadan  
Dr. Janak Thakkar  
Dr. Nandini BS  
Dr. Sachin dhawan  
Dr. Rajib Roy  
Dr. Sanjeev Aurangabadkar  
Dr. Shehnaz Arsiwala

## IN THIS ISSUE

- ◆ Welcome Message  
*Dr. Gulhima Arora*
- ◆ Radiofrequency for Facial Contouring  
*Dr. David Pudukadan*
- ◆ HIFU for Facial Contouring  
*Dr. Anuj Pall*
- ◆ Thread Lifts for Facial Contouring  
*Dr. Gulhima Arora*
- ◆ Mapping Cannulae for Dermal fillers- Size Does Matter  
*Dr. Abhay Talhati*
- ◆ Facial Assessment Stressing on Areas to Contour with Fillers  
*Dr. Sachin Dhawan*
- ◆ Photogallery
- ◆ What's new @ the Aesthetic World  
*Dr. Abhay Talathi*

**Dr. Gulhima Arora**

Convenor

IADVL- SIG-Lasers and Aesthetics

Dear IADVLites,

It gives us immense pleasure to unveil the first issue of the newsletter from IADVL-SIG LASERS and Aesthetics, in the current year, 2018. We hope you enjoy reading it as much as we enjoyed compiling it for you!

LASERS and aesthetics have become an inherent part of Dermatology not just as a cosmetic, but a therapeutic branch as well. Keeping in mind the words of Elder Russel M. Nelson, "Education is yours to obtain. No one can gain it for you. Wherever you are, develop a deep desire to learn", our team of the Special Interest Group on LASERS and Aesthetics (SIGLA), is ever-striving to keep abreast with the latest that is gaining momentum in the field and sharing it with fellow dermatologists.

The Special Interest Group on LASERS and Aesthetics (SIGLA), ever since its inception in March 2013, has always been dynamic when it comes to academic activities assigned to it. With the huge surge dermatology is seeing in the amalgamation of aesthetics and LASERS in its very existence, SIGLA has played a very important role to impart knowledge and skills about the same to fellow IADVLites, and has to its credit various academic achievements. Till date in the present year, we have conducted five aesthetic workshops in tier I and II cities across India. These were held in Thiruvananthapuram, Guntur, Tirunelveli, Vijayapur and Ahmedabad. We have trained close to 500 dermatologists in the present year, with certification from IADVL. Each workshop bags around 2 to 3 CME credit points. We have five LASER workshops in the pipeline, to be conducted in the present year. Our workshops are very well appreciated and are exhaustive with didactic lectures and practical demonstrations, to make our fellow dermatologists confident to embark on the procedures. Our faculty includes not just members from the SIGLA team, but also local and national experts in the field.

The current issue focusses on facial contouring with various modalities present in the domain of LASERS and aesthetics. From tightening to lifting and contouring, the issue promises to be an interesting read. This issue also has a photogallery to appraise you of our workshops through pictures.

The IADVL-SIGLA, is committed to the highest levels of performance and service to IADVLites, and we are grateful and thankful to our apex mentor-bodies, IADVL and IADVL Academy, for their unconditional support and guidance to us for all our ventures.

LONG LIVE IADVL! LONG LIVE SIGLA!

### **Dr. David Pudukadan**

Associate Professor

Department of Dermatology

Jubilee Mission Medical College

Thrissur, Kerala

In recent years, concern with body has gained much importance in society, because beauty is reflected in self-esteem and quality of life. This fact contributed to the growth of the search for beauty treatments. The laxity, especially in the skin, is one that has great impact on the function and quality of life. Clinically, fine lines and rhytides, skin laxity, dyschromia, and telangiectasias characterize these changes.<sup>2</sup> A lax tissue is the result of biomolecular changes, and the damage due to collagen fibres change is closely involved in this process. The hallmark of photodamaged skin is the accumulation of elastin-containing fibrils in the papillary dermis and mid-dermis, a process known as solar elastosis.<sup>1</sup> A decrease in collagen synthesis and architectural changes in the collagen fiber network accompany this process. The once-organized collagen fiber network evolves into one that is disorganized and laden with increased breakdown and reduced network formation.<sup>2</sup> Currently, there are several strategies, invasive and non-invasive, to treat these changes.<sup>3</sup>

Ablative laser skin resurfacing is a well-accepted treatment modality for facial rejuvenation because of its ability to improve, as expected, the appearance of photo-induced wrinkles. However, patients may be hesitant to pursue this treatment option because of the extended postoperative recovery period and the inherent risks of the procedure, as well as the limitation of patients able to achieve good results due to skin type. These lasers have the additional disadvantage of being diffracted, absorbed, or scattered, which results in suboptimal energy penetration.<sup>4</sup> Therefore, the development of a truly non-invasive, skin colour-independent, deep tissue tightening on sagging facial and abdominal skin continues to interest cosmetic surgeons and the public alike<sup>5</sup>.

Among the non-invasive procedures, those that use electromagnetic fields (EMF) to directly or indirectly influence cells stand out.<sup>3</sup> Radiofrequency (RF) is a safe and effective treatment for a broad range of skin conditions. It can induce wrinkle reduction, cellulite improvement, laxity and body, and skin contouring improvement.<sup>6</sup>

### **History of RF**

RF energy has many medical applications, ranging from joint capsular tightening to prostate and liver neoplasm eradication. It was initially developed in the 1920s for electrocautery but is now most widely used in dermatology for non-<sup>6</sup> ablative skin rejuvenation. In 2002, the U.S. Food and Drug Administration (FDA) approved the first RF device for facial wrinkle reduction. This device was a monopolar RF device (ThermaCool; Thermage, Hayward, CA) and it subsequently gained approval for off-face treatment in 2006. Since then, many other RF devices have been developed and combined with various laser and light sources.<sup>7</sup>

### **Mechanism**

When radiofrequency is applied by an alternating current, an electric field is generated, which achieves skin tissues, generating thermal energy. The heat is not diminished by tissue diffraction or absorption by epidermal melanin and is then appropriate for treatment of all skin types.<sup>6</sup> This therapeutic modality produces a selective and controlled rise in tissue temperature from a high frequency alternating current (3kHz to 300MHz). The rising of temperature and the depth of heating depend on the level of energy used and on the impedance of biological tissues. The energy output is calculated using the formula.<sup>6</sup>

$$\text{Energy (J)} = I^2 \times z \times t,$$

where  $I$  = current,  $z$  = impedance,  $t$  = time (seconds). The amount of energy produced therefore depends on the amount of current and the impedance of the targeted tissue.<sup>7</sup>

The final goal is to induce thermal damage to stimulate changes in collagen conformation and produce neocollagenesis in deep layers of the skin and subcutaneous tissue.

## Effects

Immediate effects are mediated by heat disruption of hydrogen bonds in the triple helix collagen structure, leading to partial protein denaturation. RF can increase local blood flow, upregulating local adipose metabolism, and is capable of stimulating lipase-mediated degradation of triglycerides or even adipocytes apoptosis. Delayed effects include thermal induced microinflammatory response in skin tissue, leading to neocollagenesis, which is the result of dermal remodelling to decompose damaged collagen by collagenase enzyme, and replace it with new collagen. Elastin and ground substance production is also stimulated.<sup>5</sup> The results achieved with RF treatments depend on several factors, including patient individual characteristics, gender, age, degree of photoaging, and skin phototype. Improvement of skin structure can also vary according to treated facial area, because different biological tissues have variable levels of impedance. Although RF and other treatments to improve skin condition are shown to be efficient, relapse is inevitable, since skin aging is a natural process, and additional treatment could be required, according to the patient's skin condition and demand, in order to keep the results.<sup>5</sup>

## Types of Noninvasive Radiofrequency Devices

Based on their number of electrodes, noninvasive RF devices can be categorized as monopolar, unipolar, bipolar, tripolar, multipolar, and multi generator. They can also combine different energy modalities in the same device, such as RF integrated with vacuum systems, infrared lights, lasers, and pulsed electromagnetic fields (PEMFs). Fractional radiofrequency (electrode pin and microneedle) has recently been developed to further improve efficacy and safety of skin rejuvenation therapies.<sup>6</sup>

## Monopolar RF

### Mechanism of Action

Some monopolar RF devices consist of three main components, a generator, a handheld tip and a cryogen unit. Others do not use a cryogen cooling system. The generator creates a constantly changing electric field, which alternates up to 6 million times per second. When the electrode meets resistance, and heat is created. The heating creates a zone of higher temperature at controlled depths of 3–6 mm. The depth of heating depends on the size and geometry of the treatment tip. Typically, the device heats the dermis from 65 to 75°C, the temperature at which collagen denatures. The cooling apparatus protects the epidermis, keeping the epidermal temperature between 35–45°C.<sup>6</sup> The skin tightening effect is based on the principle of volumetric heating.<sup>3</sup> The electrode contacting the skin delivers the electric current to the skin. The dermis is then heated uniformly and volumetrically, sparing the epidermis. The collagen-based fibrous septa that separate fat lobules in the subcutaneous tissue are also preferentially heated, leading to further collagen denaturation and contraction of the subcutaneous tissue and accounting for the immediate tightening and lifting effect on the skin.<sup>9</sup>

### Applications and Effects

The FDA initially approved monopolar RF devices to treat periorbital wrinkles. Since then, they have been used to treat laxity of the forehead, cheeks, nasolabial folds, marionette lines, jawline, and neck.<sup>7</sup>

Fitzpatrick and colleagues demonstrated the efficacy of a monopolar RF device (ThermaCool) on 86 patients in a blinded, multicenter clinical trial. Brow lift of at least 0.5 mm was reported in approximately 62% of patients.<sup>10</sup>



In a recent study by El-Domyati and colleagues,<sup>3</sup> six individuals with mild to moderate wrinkles underwent 3 months of treatment (six sessions at 2-week intervals) using a monopolar RF device (Biorad, Guangdong, China). Appearance of facial wrinkles improved from 40% to 45% to 90% to 95% at 3 months after treatment.

Jacobsen et al. treated 24 patients with laxity of the neck, nasolabial folds, marionette lines, and jawline using the ThermoCool system. Seventeen of the 24 patients showed notable improvement by 1 month after treatment that was more pronounced at 3 months after treatment.<sup>11</sup>

### **Limitations**

The major limitations to monopolar RF devices are the associated pain and the modest effects observed. The use of larger, faster tips; lower energy levels; and multiple passes can diminish associated pain but not eliminate it.<sup>7</sup> Patients who have prominent skin folds and laxity would probably benefit from more-invasive procedures.

Contraindications include implantable medical devices such as pacemakers and defibrillators and active dermatologic conditions such as collagen vascular disease and autoimmune diseases. Device companies recommend avoiding treatment over areas of skin marked with tattoos. Caution should be exercised in patients with radiated skin and those who are prone to herpetic outbreaks. A topical anesthetic cream over the treated areas may be used to minimize pain, and device companies recommend oral anxiety medications for pain control.

### **Unipolar RF**

Unipolar RF differs from monopolar RF in that it does not deliver an electric current to the skin. Instead, it uses high-frequency electromagnetic radiation at 40 MHz to induce rotational oscillations in water molecules and ultimately produce heat. This heat is dissipated to surrounding tissues and can reach a depth of 15–20 mm. The deeply penetrating technology has been used to treat conditions caused by irregularities of the fibrous septa in the dermis, specifically cellulite.

### **Bipolar RF**

The main difference between bipolar and monopolar RF is the configuration. The monopolar RF devices have one active electrode placed on the skin and a grounding electrode. The bipolar configuration consists of two active electrodes placed a short distance apart overlying the intended treatment area. The current flows between the two electrodes. The depth of penetration is approximately half the distance between the two electrodes. The major limitation of this configuration is the depth of penetration. The bipolar configuration provides more-controlled distribution of energy and less pain.

Bipolar RF devices are frequently combined with light-based technologies, termed electro-optical synergy (ELOS). Functional aspiration controlled electrothermal stimulation (FACES) is another system used with the bipolar device that uses a vacuum to maximize and control penetration of the electric current. Multipolar uses multiple poles with a single generator to increase the depth of penetration. Multi generator uses multiple generator to generate energy which feeds each electrodes which creates waves that penetrate deeper into the tissue.

### **Mechanism of Action**

The mechanism of action for simple bipolar RF devices is similar to that of monopolar RF devices. The electric current generates heat as it travels through the skin and meets resistance from the tissue. This heat causes collagen shrinkage, an inflammatory response, and fibrous septa contraction in the dermis.

The ELOS system uses the synergistic effects of light- and RF-based devices. The light energy is used to preheat the target tissue, which lowers the tissue's impedance. The lower impedance makes the tissue more susceptible to the RF component so that it is selectively targeted. Therefore, lower levels of energy of the light and RF component are needed to produce the desired effect with fewer side effects. The optical component can be used to target pigment and hair.

The FACES system uses a vacuum system in combination with bipolar RF. The vacuum sucks in the skin, which allows for closer alignment and deeper penetration with the RF energy than with traditional monopolar and bipolar devices. We can use lower energy levels and can achieve deeper penetration, leading to greater efficacy, less pain, and lower incidence of side effects.

Multi generator system used multiple generators to produce multiple waves. One technology (3Deep Technology) uses same frequency waves which repel each other and the deeper waves penetrate deep into the tissue whereas another technology uses different wavelengths and the longer wavelengths penetrate deeper.

### **Applications**

Bipolar devices, combined RF and optical energy systems, and FACES are used for the treatment of facial laxity, rhytid reduction, vascular and pigmented lesions, acne, acne scarring, hair removal, and cellulite.

### **Evidence-Based Efficacy and Side Effects**

#### ***Skin Rejuvenation***

Combined bipolar RF and IPL devices are frequently used for skin rejuvenation. Histologic analysis revealed an increase in epidermal thickness, a 53% reduction in elastin content 3 months after treatment, and a 28% increase in newly synthesized collagen fibers. Treated skin revealed less collagen atrophy and greater interstitial edema, while untreated skin showed atrophic and intensely elastotic dermal collagen.

This technology has been used in striae distensae on the abdomen with good improvement.

#### **Limitations**

The major limitations of the bipolar RF devices is the depth of penetration. Combination with light devices has been used to overcome this limitation. Overall, these devices seem to be tolerated better than monopolar RF systems, but the comparative efficacy of these devices has not been established.

### **Fractional RF**

Fractional RF is a newer non-ablative approach. There are two ways to deliver fractional RF. Whereas some devices use electrodes, others use an array of microneedles arranged in pairs between which bipolar RF energy is delivered. Thermal wounds are created in a nonhomogeneous fractional form directly to the reticular dermis. The area directly in contact with and below the array of microneedles or electrodes is selectively heated while the areas between the targeted areas are left intact.

#### **Mechanism of Action**

Fractional RF devices consist of a handheld applicator with a disposable tip. The tip contains parallel rows of microneedles or electrodes arranged in a bipolar array. The RF energy flows between each pair of positively and negatively charge electrodes or needles so that each pair forms a closed circuit of bipolar RF current. The geometry of the electrode pairs defines the volume of each lesion. The fractionally delivered energy creates zones of affected skin adjacent to unaffected areas. The treated areas have resulting thermal damage in the deep dermal collagen, which stimulates wound healing, dermal remodeling and new collagen, elastin, and hyaluronic acid formation. The unaffected areas located in between affected areas initially maintain skin integrity but, in the long term, serve as a reservoir of cells that promote and accelerate wound healing.

#### **Efficacy**

Fractional RF (FRF) has been used mainly for skin rejuvenation. There was a trend toward less wrinkling and elastosis, but this difference was not statistically significant. In a study patients who underwent FRF were compared with six patients who underwent a surgical face lift. Patients who underwent a surgical face lift demonstrated 49% improvement in skin laxity over baseline, compared with 16% of patients treated with FRF.

FRF has been combined with fractionated optical energy with a 915-nm diode with significant improvement in acne scarring, texture, and pigmentation.

### **Limitations**

It appears that FRF devices are a safe, tolerable, and effective modality for wrinkle and facial laxity reduction. The most common side effects are erythema and edema, which are transient, and patient discomfort does not seem to be a major disadvantage. A topical anesthetic cream may be used before treatment to minimize pain. Studies suggest that this nonablative method is inferior to the criterion standard for rhytid reduction, the surgical facelift, but is associated with less downtime and fewer side effects.

### **Conclusions**

Nonablative RF devices have broad applications in the field of dermatology. They are used for the treatment of skin laxity, rhytides, acne vulgaris and scarring, and cellulite. Results have overall been favorable. The side-effect profile of these devices is more benign than that of invasive and ablative modalities and include transient erythema, edema, and patient discomfort.

Overall, nonablative RF is a safe, tolerable, effective tool for skin rejuvenation and cellulite treatment. It produces modest results that should serve as an alternative but not as an equivalent substitute to surgery. The major advantage of this modality over ablative and surgical treatments is the lower rate of side effects and less downtime required after treatment

### **Dr. Anuj Pall**

Chief Director

EILAM

Gurugram

Haryana

#### **Introduction**

The concept of applying HIFU for therapeutic aims was introduced in 1942 and for more than 50 years HIFU has been used for treating organ tumors, kidney stones and uterine fibroids so as to reduce the need for aggressive procedures.<sup>1</sup>

From a dermatologic point of view, HIFU (High Intensity Focused Ultrasound) is one of the optimized methods for non-ablative skin resurfacing treatment to preserve the epidermis without downtime. It induces tissue destruction by heating due to absorption of acoustic energy. HIFU has a target depth from the reticular dermis to the deeper aponeurotic system. Therefore, tissue damage by HIFU for skin rejuvenation is expected to induce collagen shrinkage and stimulate neo-collagenesis, leading to tightening and lifting of the skin while preserving the epidermis. In addition it can also heat fat layer and septa in between adipocytes thus reducing fat and tightening of this layer as well.<sup>2</sup>

#### **Mechanism of Action**

The superficial muscular aponeurotic system (SMAS) is a fibromuscular fascial extension of the platysmal muscle that arises superiorly from the fascia over the zygomatic arch and is continuous in the inferior cheek with the platysmal muscle.

It is a continuous fibrous network in the face with significant holding properties and is considered to be the most effective structure for skin lifting and tightening. SMAS is in close association with specific facial muscles, including the platysma, orbicularis oculi, occipitofrontalis, zygomatici, and levator labii superioris. The depth of SMAS is 4.5 mm. The facial fat distribution is one of the most evident clues to an individual's age with facial arcs being the defining features of youth. The aging process leads to fat atrophy at certain areas of the face, most strikingly the mid face, thus, disrupting the smooth arcs.<sup>3</sup>

The mechanism of HIFU is transcutaneous heat delivery to the deep dermis, subdermal connective tissue, and fibromuscular layer in precise microcoagulation zones at consistent and controlled depths without damaging the epidermis. (Fig. 1) This microcoagulation is thought to cause gradual tightening of the skin through collagen contraction and remodeling.<sup>4</sup> HIFU first received approval for eyebrow lifting, but dermatologists are using the technology for many off-label applications, such as facial rejuvenation, and lipolysis.

When used for body sculpting, HIFU delivers focused, high intensity ultrasonic energy to deep subcutaneous tissue, generating heat that is capable of effectively ablating adipocytes and thermally modifying collagen within the tissue matrix. In addition to local adipocyte necrosis, there is also evidence of collagen remodeling from the thermal effects of HIFU. Application of HIFU at a frequency of 1 MHz to adipose tissue leaves collagen fibers intact, but when it is done at frequencies of 2–3 MHz, there is diffuse contraction of collagen fibers. The result is noninvasive tightening and lifting of lax facial and neck skin, with multiple studies demonstrating significant improvement in facial ptosis specifically of the eyebrows, nasolabial folds, and mandibular angle and platysma. On performing histological analyses after the procedure, it was confirmed that HIFU disrupts or denatures collagen fibers, leading to new collagen formation accompanied by a general tightening of the septal fibers and skin.<sup>5</sup>

## Mechanism

HIFU (High Intensity Focused Ultrasound) is delivered into the deep skin fractionally

Cause thermal coagulation to SMAS (Superficial Muscular Aponeurotic System), fascia, deep dermis and subcutaneous fibrous tissue

By wound healing, skin tightening and rejuvenation happens gradually with time

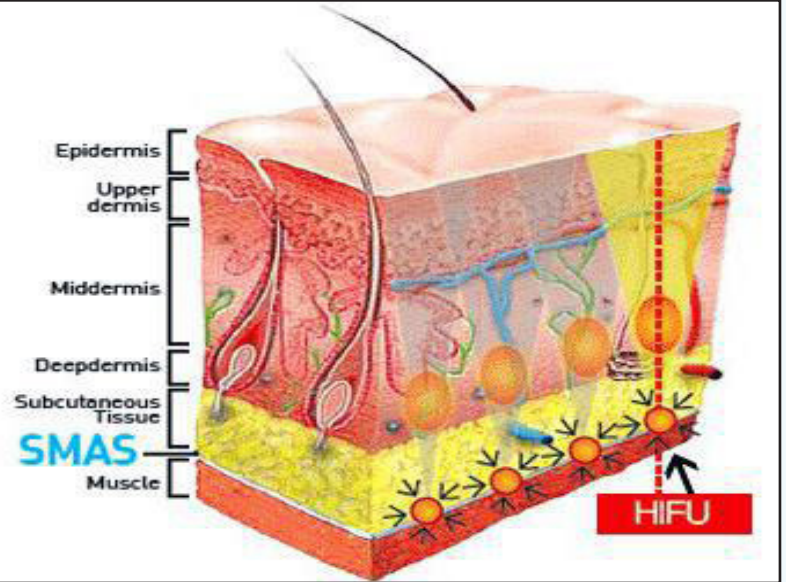


Fig. 1

## Equipments

A number of HIFU devices are currently available for facial lifting. Most of them are equipped with an ultrasound imaging system and transducers (4 MHz- 4.5 mm, 7 MHz- 3 mm & 1.5mm) and have been shown to produce similar coagulation and ablation patterns on a tissue mimicking phantom and cadaveric skin.<sup>6</sup>

Imaging systems, both B-mode ultrasonography and magnetic resonance imaging, can be incorporated into HIFU devices to guide each step of therapeutic procedures. This combination makes the coagulative procedures more reliable and practical, and leading to safer applications of HIFU in clinical practice. HIFU can penetrate deeper into the tissue in comparison to lasers, monopolar RF and microneedles with or without RF. (Fig. 2) This enables targeting the SMAS that covers the face and connects the facial muscles with the dermis.

	HIFU	RF	LASERS
Temperature	60-70°C; Denaturation	<55°C; Sub-Optimal	100°C; Vaporization
Depth	4.5mm, 3mm & 1.5mm	<3mm; Variable	<1.5mm; Superficial
Precision	Precise & Fractional	Bulk Heating	Precise & Fractional
1.0 mm			
1.5 mm			
3.0 mm			
4.5 mm			
Labels	Dermis, Fat/Connective Tissue, SMAS, Muscle		

Fig. 2



## Procedure

The available frequency/focal depth transducers include a 4-MHz/4.5-mm, 7-MHz/4.5-mm, 7-MHz/3.0-mm, 10-MHz/1.5-mm, and 7-MHz/1.5-mm-narrow focal depth transducers. Each transducer delivers a beam of HIFU to the selected focal depth where tissue is heated to  $>60^{\circ}\text{C}$  at the 1- to 1.5-mm thermal injury zone and collagen undergoes thermal coagulation. Areas with the thinnest skin, such as the neck and periocular area or the brow and temple, should be treated with superficial depth probes whereas cheeks and submental skin are best treated with the deepest 4-MHz/4.5-mm transducer followed by additional treatment with a superficial transducer. (Fig. 1)

Parallel HIFU-treatment lines up to 25 mm in length and spaced 2 to 3 mm apart are manually delivered to the target area. (Fig. 3) The overall number of lines applied to a treatment area depends on the size and the treatment protocol. Treatment guidelines including transducer selection and suggested treatment patterns over different areas of the face are provided by the manufacturer. Available parameters such as number of tips and their exact depth of penetration, length of lines, and density of HIFU points, as well as the maximum of energy (1–3 J) differ among the devices. Manufacturers are Ulthera (now bought by Merz, Frankfurt-am Main, Germany), Jeisys (Jeisys Medical Inc., Seoul, Korea), Classys (Seoul, Korea), and others.

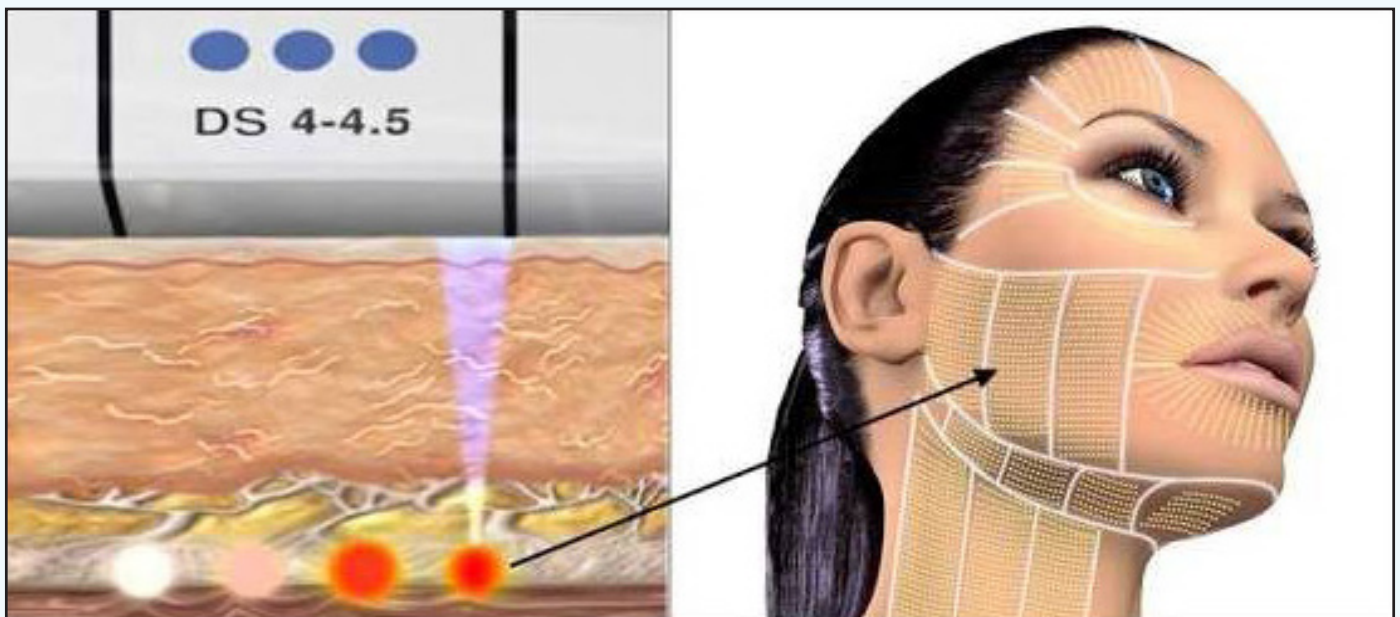


Fig. 3

## Indications

The important indications in facial rejuvenation are a shrinking of the fibrous septae in the SMAS system. This leads to a moderate lifting effect and also reduces excess fat in cheeks or double chin.

Other indications are treatments of the eyelids— a maximum brow lift of 1.9 mm can be achieved after treatment of the frontal and periorbital area, the brow positioning, lower face tightening, and the facial outline. For the facial outline, the target sites are under the chin, the top of the neck, the jowls and outer cheeks, and possibly the area behind the nasolabial folds. For sagging eyebrows, the forehead should be treated, especially the lateral area, the superior part, the area below the eyebrow. HIFU can cause a reduction in fat especially on cheeks and neck by using longer wavelengths. The mechanism is similar to tightening: Treatments with different focal depths using 3- and 4.5-mm tips lead to a better tightening effect especially after 3 to 6 months in upto 90% based on subject self-assessment. With HIFU, the most significant improvement can be achieved on the lower half of the face such as a moderate lifting and best results can be seen in mild-to-moderate laxity, where surgical lifting is not yet considered or not urgent.<sup>7</sup>

## Side Effects and Dangerous Zones

Side effects are usually mild and include transient erythema lasting 15 minutes to 2 days. Some edema in sensitive areas like eyelids or reduced sensation in the forehead may last for several days but they are always reversible. Sometimes superficial bruising may occur, some little pain in the area under the chin or in the eyelids that persists for a few days. Avoidance of social contact is not required. Superficial treatments are recommended (1.5 mm) for thinner skin. Here, usually a single tip can be chosen and only one pass. Treatment should not be done within the orbital rim and exposing the area of the thyroid gland. Avoid the laryngeal cartilage. Temporary numbness or nerve irritation was reported in a few patients. These can be prevented by avoiding treatment directly over the mandible or facial nerves. The risk, however, is small, since most superficial branches of the facial nerve are located at depths greater than 9 mm, and the deepest point targeted with this treatment does not exceed 4.5 mm. Contraindications include- presence of pacemakers and defibrillators or metal implants in the treated area as well as pregnancy.<sup>8</sup>

## Complications & Managements

### (1) Pain

HIFU is a sense of 'shockwave' created by 'soundwaves' as it generates heat through secondary action. Since generating heat might create pain, anesthesia is required. There are topical anesthesia and nerve block for facial anesthesia. Commonly topical anesthesia is recommended. During treatment, it is important to remember the bony prominences. Areas where bones are protruded have relatively thinner soft tissue, and HIFU can target periosteum or deeper portion. In this case, there could be a possibility of accompanying nerve damage, so it requires special attention. This is seen on the face over the cheekbone, mandibular surroundings and the forehead area. This may lead to pain. It is advisable to use 3mm or 1.5mm transducer with low power. Rarely, patients complain about toothache. If patients have prosthetics or tooth braces, we should reduce the intensity and make enough air space inside the cheek and then do the treatment.

### (2) Nerve injury

Since HIFU targets relatively deep layers like SMAS, there is a chance of nerve injury. Even if the nerves are damaged, partial damages such as neurapraxia or axonotmesis recover after a period of time. However, in case of neurotmesis, it can lead to permanent disability. Thus, we should be careful while selecting energy and treatment area. Also, patients' subjective responses to the pain or the facial nerve response are important indicators for the treatment. Nerve block is not recommended. Around the mouth, attention should be paid to the oral branches of infraorbital nerve and mental nerve. Nerves around the mouth are superficial in many cases. Around the eyes, special precautions should be taken for the supratrochlear and infraorbital nerves.

### (3) Thermal injury (Burn)

In case of HIFU, burns are very rare compared to the frequency of burns from IPL, fractional laser or the RF devices. Firstly, when energy is too high, the area of thermal damage becomes wider and that also burns the skin surface. The thermal coagulation zone extends to the skin surface in axial direction. Main causes are, 1) energy is too strong, 2) energy is applied to the same area continuously or 3) setting for the spacing is too narrow compared to the energy. Secondly, due to the improper contact between the skin and the cartridge, ultrasound emitting surface of the cartridge generates thermal energy and burns the skin. The thermal damage occurs on the surrounding surface due to the improper emission of ultrasound. In case of using insufficient ultrasound gel or improper contact with the skin, there are chances of getting burnt but the frequency is very low.

Cheek has less frequency of side effect during treatment, but neck or the forehead have relatively higher chances of side effect.

## Combination Treatment

HIFU can be combined with other rejuvenation procedures such as fractional lasers, monopolar radiofrequency and microneedling radiofrequency to achieve optimum results in skin tightening and lifting. When treating double chin, HIFU can be performed 3 to 6 weeks after injection lipolysis. The treatment protocol should be customized and planned for each patient according to their problem and requirements.



### Suggested Reading

1. Jalian H, Avram MM. Cryolipolysis: a historical perspective and current clinical practice *Seminars in cutaneous medicine and surgery*. 2013; 46.
2. Shek SY, Yeung CK, Chan JC, Chan HH. Efficacy of high-intensity focused ultrasonography for noninvasive body sculpting in Chinese patients. *Lasers Surg Med*. 2014; 46(4):263–9. doi: 10.1002/lsm.22232.
3. Alam M, White LE, Martin N, Witherspoon J, Yoo S, West DP. Ultrasound tightening of facial and neck skin: a rater-blinded prospective cohort study. *J Am Acad Dermatol* 2010;62:262-269.
4. Minkis K, Alam M. Ultrasound skin tightening. *Dermatol Clin*. 2014; 32(1):71–77.
5. Fatemi A. High-intensity focused ultrasound effectively reduces adipose tissue. *Semin Cutan Med Surg*. 2009; 28:257–262.
6. Kim HJ, Kim HG, Zheng Z, Park HJ, Yoon JH, Oh W, Lee CW, Cho SB. Coagulation and ablation patterns of high-intensity focused ultrasound on tissue-mimicking phantom and cadaveric skin. *Lasers Med Sci* 2015; 30: 2251-2258.
7. Ter Haar G. Therapeutic ultrasound. *Eur J Ultrasound* 1999;9(1):3–9.
8. Fritz K, Salavastru C. Ways of Noninvasive Facial Skin Tightening and Fat Reduction. *Facial Plast Surg* 2016;32:276–282.

### Dr. Gulhima Arora

Consultant Dermatologist

Mehektagul Dermaclinic, New Delhi

Convenor, IADVL- SIG-Lasers and Aesthetics

Honorary Fellow, Philippine Academy of Clinical and Cosmetic Dermatology

#### Introduction

Demands for reversal of an aging face have led to an ever-increasing number of rejuvenation modalities, which can be used in isolation or in combination with each other. Threads have been used as non-absorbable products earlier, however its rising popularity owes it to the newer generation threads, which are absorbable and easily administered. This ease of administration with minimal side effects has also led their use in youthful face for face contouring alone or in combination with other established modalities.

#### Historical Perspective

Concept of suture suspension techniques in surgery gave rise to the concept of thread lift in face contouring. Focusing on minimally invasive nature as a replacement for surgical face -lift, barbed sutures were introduced in the early 1990s by Dr Marlen Sulamanidze as APTOS threads made of non-absorbable polypropylene<sup>2</sup>. Increasing complications to these such as thread palpation, migration, extrusion, and abnormal facial expression led to further advances with the introduction of threads which may be uni or bi-directionally barbed, knotted or knotless, anchored or be free floating, and may be combined with standard face lift surgeries.<sup>3</sup> These were largely non-absorbable and remained in the domain of reconstructive surgeons predominantly. Absorbable materials experimented with included catgut amongst others followed by polydioxanone (PDO), Polylactic-co-glycolic acid (PLLA) which are used now (Table 1). Presently a variety of threads with these materials are available: smooth, barbed, with cones, free floating and suspension in sizes of 25mm to 140mm in length and 0.05mm to 0.4mm gauge with needle delivery of 21 to 30 G.

Table 1. Product material and their absorption characteristics

Product material	Absorption
Plain Catgut	+/- 70 days
Chromic catgut	+/- 90 days
PGA (Polyglycolic acid)	+/- 60-90 days
PGLA (Polyglycolide-co-lactide)	+/- 60-80 days
PGCL (Polyglycolide-co-caprolactone)	+/- 80-120 days
PDO (Polydioxanone)	+/- 180-240 days
PLLA [Poly (lactic-co-glycolic acid) copolymer]	+/- 2 years

Uneven descent, skin and soft tissue laxity of the face along with textural change defines an aged face. As compared to the earlier thread lift concept of only mechanical lifting to counter the descent, present products aim at inducing an immediate mechanical lift followed by increased fibroblast activity, collagenesis and fibrosis with angiogenesis which helps maintain the lift and promotes rejuvenation at the same time. Subsequent absorption of the threads leaves behind the tissue changes, hence exhibiting minimal foreign body reactions.<sup>1</sup>

This mechanism of action is equally effective in a youthful face even if only contouring is required. The direction of thread insertion is determined by vectors of gravitational force, relaxed skin tension lines with the basic concept of process being insertion of the thread along folds or wrinkles from lower to higher area of the intended treatment site. Scaffolding provides increased strength in heavy-set individuals. Thread insertion by fan technique and cross-hatching are used for face contouring, while the linear threading and serial puncture are preferred for wrinkles and folds (Figs. 1a–d). Newer techniques such as vertical lift attempt to suit this procedure to Asian face structure.<sup>4</sup>

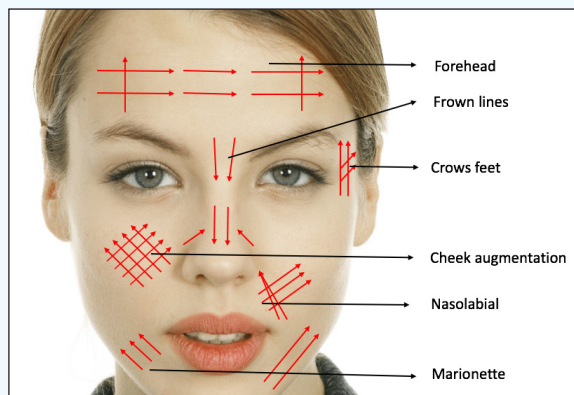


Fig. 1a: Techniques of thread insertion.

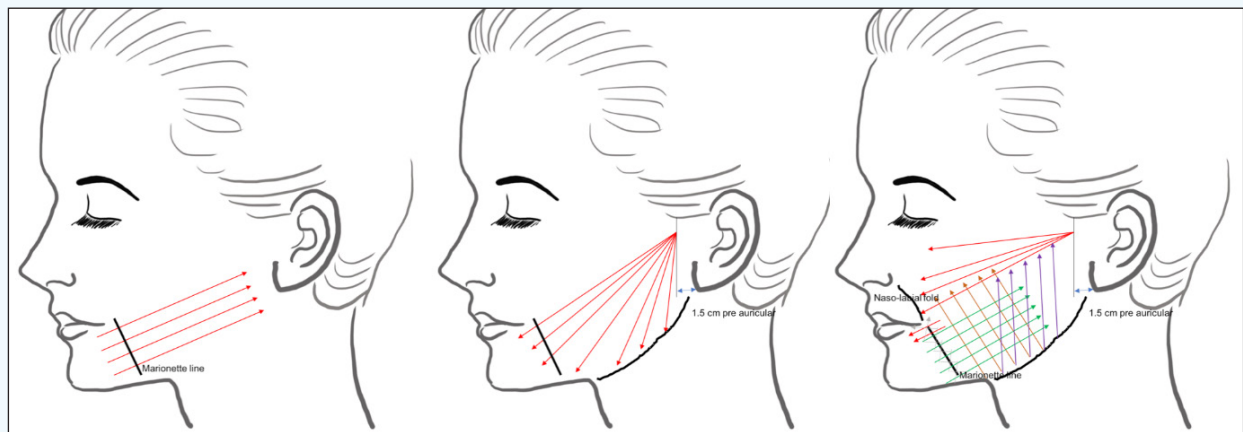


Fig. 1b: Marionette, Nasolabial, Jaw line and Cheek lift.

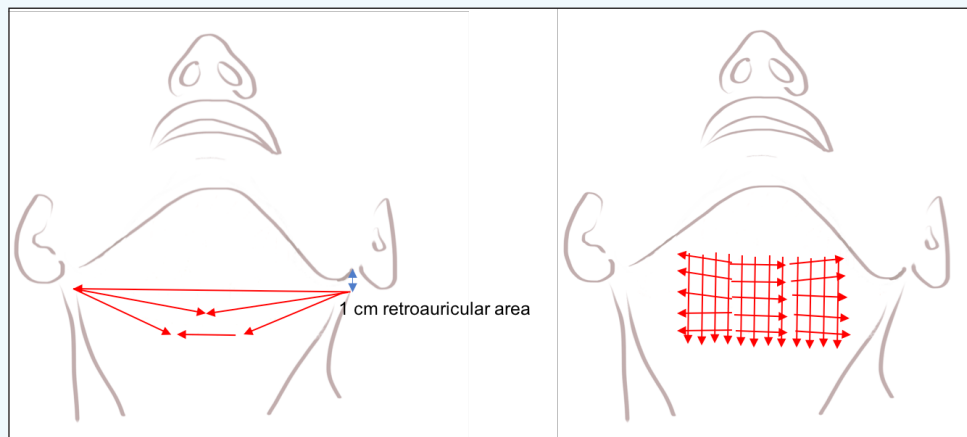


Fig. 1c: Neck: hammock and cross hatch technique.

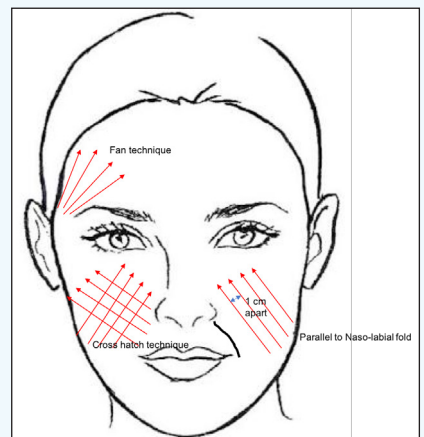


Fig. 1c: Fan & Cross hatch technique.

## Indications

Thread lift can be used for eyebrow, forehead, cheeks, jawline and chin contouring. Managing the neck laxity along with the jowl/ jaw line may be necessary in some cases (Figs. 2 & 3).



**Fig. 2:** Nasolabial correction with thread lift: Pre-treatment (left) & Post-treatment (right).



**Fig. 3:** Brow contouring with thread lift: Pre-treatment (left) and Post-treatment (right).



**Fig. 4:** Jaw line definition with thread lift (Silhouette soft™)

## Contraindications

Apart from the contraindications as with any other surgical procedure, hypersensitivity to the thread material is an absolute contraindication.

## Complications

Thread insertion is a relatively safe procedure with minimal downtime.<sup>5</sup> The treating dermatologist must be aware of the face anatomy, particularly the position of neurovascular bundles to avoid the untoward side-effects (Table 2).

Table 2. Complications of thread lift

Early (Immediate or few days)
Pain
Bruising and haematoma
Swelling
Transient local irritation
Intermediate (1-2 weeks)
Bruising
Tip extrusion of the thread ends
Prickling sensation
Tip extrusion
Infection
Late (>2 weeks)
Rippling and indentation
Visible threads
Thread extrusion

## Conclusion

Thread lift is a safe procedure in experienced hands for face and other areas such as the neck and breast.<sup>6</sup> Newer materials maintain tensile strengths for extended periods of time and offer an alternative to those not keen for surgical lift, and in also cases where post-surgical asymmetry needs correction.

## Suggested Reading

1. Suh DH, Jang HW, Lee SJ, Lee WS, Ryu HJ. Outcomes of polydioxanone knotless thread lifting for facial rejuvenation. *Dermatol Surg* 2015;41:720-5.
2. Sulamanidze MA, Shiffman MA, Paikidze TG, et al. Face- lifting with APTOS threads. *Int J Cosmet Surg Aesthetic Dermatol*. 2001;4:275-80.
3. Baker DC. Lateral SMASectomy. *Plast Reconstr Surg*. 1997;100:509-13.
4. Kang SH, Byun EJ, Kim HS. *Dermatol Surg*. 2017;43:1263-70.
5. Atiyeh BS, Dibo SA, Costagliola M, Hayek SN. Barbed sutures "lunch time" lifting: evidence-based efficacy. *J Cosmet Dermatol* 2010;9: 132-41.
6. Arora G, Arora S. Thread lift in breast ptosis. *J Cutan Aesthet Surg* 2017;10:228-30.

## MAPPING CANNULAE FOR DERMAL FILLERS- SIZE DOES MATTER

### Dr. Abhay Talhati

Skinspace Clinic

Mumbai

Injectable dermal fillers have become a popular aesthetic treatment over the past decade. Better understanding of beauty & science has led to significant increase in the number of indications for dermal fillers in day to day practice. Midface volumizing, Lip Enhancement and Tear Trough corrections are commonly performed now alongside basic treatment of Nasolabial Folds.

Most of the filler procedures are typically performed using hypodermic needles provided with the product. With increasing number of procedures certain complications like Hematomas, Post injection oedema and vascular compromises leading to tissue necrosis are also increased. Sometimes sharp bevelled needles produce more tissue injury and also certain sets of patients have needle phobia. To overcome these limitations dermal fillers can be injected using blunt cannulas.

This article shall discuss unique advantages and disadvantages of cannula and guide physicians for choosing the right cannula.

#### Advantages of Cannula

- **Single Entry Point:** The biggest advantage of using cannula is that we can treat larger surface areas with a single entry site.
- **Minimal Downtime:** There is less pain and less possibility of oedema and bruising.
- **Shorter Procedure Time:** The procedure can be performed quickly
- **Safety:** There is a decreased risk of intravascular injections and decreased risk of blindness and skin necrosis. Cannulas make it safe to treat areas like tear troughs and nose.

#### Disadvantages of Cannula

- **Learning Curve:** Usually inserting a cannula in the correct plane to bring out the best patient outcomes needs a little learning and practice on part of the injector. Most of the injectors can do well after 8-10 patients.
- **Inability to Change Planes:** It is difficult to quickly change the planes of injection from deep to superficial or otherwise as compared to needles.
- **Accessibility:** Intradermal injections and treatment of areas like perioral wrinkles, philtral columns etc. could be difficult.
- **Safety:** Not 100% Safe in preventing intravascular compromise.

#### Choosing the Right Cannula

Different size and lengths of cannulas are available. Correct choice of the cannula depends upon following factors:

- 1) **Product to be used:**  
Large particle and more cohesive HA Gels shall need large bore cannula (21G or 23G).  
Small particle and less cohesive HA Gels can be injected with 25G cannulas.
- 2) **Indications:**  
Cheek enhancement needs 5 cm or 7 cm cannula.  
Lip Enhancement, Nasolabial folds, Marionette Lines can be treated with 4 cm cannulas.

- 3) Flexible Vs Rigid Cannulas:  
Rigid cannulas: Cheek Augmentation, Nose reshaping, Tear troughs.  
Flexible cannulas: Lips, Nasolabial Folds, Marionette Lines.

### **Basic Technique of Using a Cannula**

After complete facial assessment physician shall mark the area to be treated and decide the depth of injection. Single and anatomically most convenient entry point is selected. After injecting local anaesthetic at the entry point a suitable gauge needle (Usually same or wide gauge than planned cannula) is used to create an entry site. Needle needs to be inserted till the depth of injection planned. Blunt cannula is attached onto the Filler Syringe and is inserted to the desired depth through the entry site. Usually fanning technique or single large bolus technique is followed to layer the product. The cannula is withdrawn followed by a gentle moulding.

### **Tips to Produce Better Results**

- 1) Pinch the skin and insert the cannula: This further reduces the chance of bruising.
- 2) Try and finish the desired injection with single entry. Re-Entry of cannula through the same site is difficult.
- 3) Ask patients to avoid massaging after injection.

### **Author's Experience (Dr. Abhay Talathi)**

Author has compared outcomes of needle vs cannula in 40 patients (20 patients in each group) in injecting tear troughs. While patient satisfaction and efficacy remained the same with both the techniques, number of complications were less with cannula. Incidence of Bruising was 55% with needles as compared to 10% with cannulas. Pain and swelling was encountered in 45% of patients with needles as compared to 15% with cannulas. (unpublished data, observations were published as a poster at WCD 2015).

### **Available Cannulas**

Dermasculpt Cannulas/ Pixel Cannulas are some of the commercially available brands in India. Different gauges and sizes can be chosen based on injectors preference.

### **Conclusion**

Use of Blunt Cannulas is a rewarding technique for dermal filler injections. Difficult indications can be treated with better safety and same efficacy after learning the technique well.

I Declare no Conflict of Interests.

### **Suggested Reading:**

- 1) Filler Injection with Micro-Cannula Instead of Needles, JOE NIAMTU, III, DMD, Dermatol Surg. 2009;35:2005–2008.



## FACIAL ASSESSMENT STRESSING ON AREAS TO CONTOUR WITH FILLERS

### Dr. Sachin Dhawan

Skin N Smiles Dermatology & Aesthetics

In the last decade, filler techniques have undergone a paradigm shift. Anatomical advances by means of cadaver dissection and medical imaging have highlighted volume loss as the principal cause of facial ageing. Initial techniques emphasized on 'Line chasing' with dermal and superficial, subcutaneous injections; however, recently, there has been a major shift in treating the ageing face with supra periosteal deep tissue correction.

Careful analysis of the facial laxity and deficiencies are important before embarking upon the correction of volume loss.

In the past decade, we have been fortunate enough to witness the availability of new fillers with different characteristics and rheologic properties, specifically, elasticity ( $G'$ ), viscosity ( $n^*$ ), hydrophilicity, particle size, particle concentration and cross-linking.

( $G'$ ) describes a material's ability to resist compression, whereas ( $n^*$ ) refers to a material's ability to resist shearing forces. Hydrophilicity is the product's capacity to attract water and expand. Particle size, as determined by the polymerization of the glycosaminoglycan chains and straining techniques, contributes to the filler's overall "lifting and filling" power. Increased particle concentration and cross-linking strengthens hyaluronic acid durability by increasing resistance to enzymatic degradation.

It is now possible to match different fillers to the characteristics of the tissues to be restored which are dermal tissue, subcutaneous tissue, fat pads or bone.

For consistent and effective facial analysis, it is helpful to consider the topography of the face as being divided into three region (i.e., the upper face, midface, and lower face). Each region undergoes characteristic volume atrophy or hypertrophy.

The anatomical order of contouring influences the ultimate outcome of facial volumization. Augmentation of the temple alone may provide lateral brow support and therefore should be addressed before moving more caudally. Similarly, correction of the malar areas before tear trough, lower lid, and nasolabial fold injections improves these, thus lowering the amount of product required to subsequently treat these.

Owing to monetary, racial, cultural and ideological issues, India had been a little slow to shift on to the global facial contouring popular bandwagon, but in the last few years full face facial contouring become increasingly gaining popularity.

The following points should be kept in mind while assessing the face especially in the Indian scenario –

1. Assess from all angles and directions, not only from the front. Look from above and from slightly behind as well (topographical examination) for any shadows, that can be a clue to areas of volume loss.
2. Talk to the patient to know if they are looking for volume restoration or correction of specific lines and fold. Based on that, one can do a mental distribution of the proportion of product that needs to be used for either. Educate them about the influence of volumizing the mid face and temples on the overall ability to affect nasolabial folds.

3. Note features like submental fat hypertrophy, masseter hypertrophy and extreme jawline laxity and jowls that need concomitant procedures like Injection lipolysis, botulinum toxin and thread lifts, and discuss and make a step wise plan with the patient so that expectation alignment is on course.
4. UPPER FACE (Temples, Brows, and Superior Periorbital Area)
 

The youthful upper face is characterized by a subtle convexity of the temple, forehead, and lateral brow and fullness of the upper eyelids.

  - A. Temporal hollows are under recognized and happen due to atrophy of deep temporal fat pad and temporal extension of the buccal fat pad. It leads to overall facial narrowing and lateral eyebrow ptosis and pseudodermatochalasis of the upper eyelid giving a tired look.
  - B. Forehead hollowing and flattening. Subtle correction to reduce the bony deflated look is needed.
5. MID FACE (Inferior Periorbital Area, Malars, Maxilla, and Nasolabial Fold)
 

Mid face deflation manifests as loss of malar projection and nasal support, with accentuation of the lower eyelid contour age-related bony loss of the orbit and maxilla and a posterior rotation of the maxilla leading to a decrease in the maxillary angle and widening of the pyriform aperture. The deflated mid- face is marked by prominent transitions between cheek fat pads, flattening of the malar prominence, increased nasolabial fold depth, lengthening of the cutaneous upper lip, and overall loss of lip volume.

  - A. Periorbital hollows and tear trough deformity is extremely common in tropical population. They result from resorption of the orbital rim especially in the inferio-lateral part, weakening of the retaining ligaments and atrophy and movement of SOOF (sub orbicular oculi fat) and ROOF (retro orbicularis oculi fat).
  - B. Malar mounds happen very early in tropical population and should be recognized and corrected.
  - C. Malar prominence and the "OGEE CURVE". It is an imaginary S shaped curve starting from the malar prominence to the submalar and the mandibular area, that is prominent in a youthful face. Flattening and breaking of the curve happens with age and can be restored with adequate cheek contouring.
  - D. Nasolabial folds can be naturally corrected by deep injection of fillers in pyriform fossa to compensate for the maxillary bone loss rather than overfilling the folds. Many patients see the face in 2D in a mirror and are fixated on nasolabial fold correction, so adequate attention should be given to this to satisfy them.
  - E. Ptosis of nasal tip needs to be recognized and corrected with an injection inferior to the columella.
  - F. Submalar and Pre auricular hollows can be subtle and can be missed unless one looks out for them.
  - G. Assess the distance between philtrum and vermillion border. A longer philtrum column and an inverted upper lip is a sign of aging, hence need lip volumizing.
6. LOWER FACE (Jawline, Perioral Area, and Lips)
  - A. Retruded chin is common and seeing the face in profile view gives an idea of this. In case of marginal retrusion that is not very obvious, placing a ruler from the nasal tip touching the lips will help. Building up the chin volume helps to lengthen the face and reduces the apparent "double chin" look. Women usually do not like the broad chin look, so focus should be more on the anterior and inferior projection of the chin.
  - B. Jowls and Pre Jowl sulcus. Ligamental weakening and ptosis of fat pads lead to their formation and since jowls are a very visible sign of aging face, correction with supra periosteal injections is rewarding.
  - C. Downturned oral commissure and Mentolabial folds.
  - D. Angle of Jaw. A sharp angle is desirable in males as it gives a masculine look. Even in females loss of bone volume should be compensated to give a lifted appearance.
7. Ethnic and racial aspects. By virtue of being a huge country with multiple ethnicities, we have to keep in mind the 'IDEAL FACE' of different regions may be different.

While the Idea of contouring is to give an OVAL FACE with smooth contours, some cultures like north Indians prefer rounded fuller face. Alternatively North East Indians and Bengalis usually have a naturally rounded face with malar prominence so one does not need to focus much on these areas. Southern states see more of retruded chin faces.

8. Contouring also needs to be sensitive to the social life of the patient. A person who is into socializing regularly may want high cheek bones, contoured lips and an overall slim face whereas a family oriented person may not like them as their family members may not approve of a drastic change in look.

In addition to clinical assessment, a psychological assessment of the patient and his/her ability to appreciate subtle changes that are seen with facial contouring with fillers is very important too.



Fig. 1

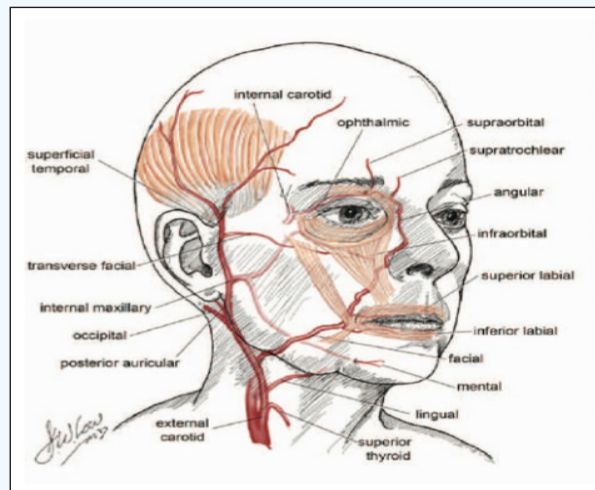


Fig. 2

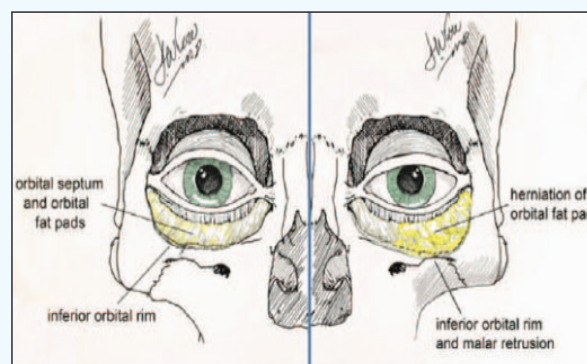


Fig. 3

### Suggested Reading

1. Facial assessment and injection guide for Botulinum toxin and injectable hyaluronic acid fillers: Focus on mid face. Mauricio De Maio et al ; Plastic & reconstructive surgery: 140(4):540e-550e. October 2017.
2. Current trends in facial rejuvenation with fillers. SZ Arsiwala. J Cutan Aesthete Surg. 2015 Jul-Sep; 8(3):125-126.
3. Current applications of facial volumization with fillers AJ Wilson et al. PRS Journal vol 137.

# PHOTOGALLERY

## IADVL SIG Lasers and Aesthetics Activities







**Dr. Abhay Talhati**

Skinspace Clinic

Mumbai

**Journal Scan**

This section focuses on bringing out the most advanced information from the aesthetic world. Though we wish to know all the new advances, the simple objective of this section is to keep it relevant for our practices.

Hereby I wish to discuss three interesting reads published in recent past. For the ease of readers three discussions are presented separately with initial text discussing the excerpts from the published data followed by expert comments from author's experience.

- **Botulinum Toxin Type A**

Key Parameters for the Use of AbobotulinumtoxinA in Aesthetics: Onset and Duration. Mark Nestor, MD, PhD Glynis Ablon, MD Andy Pickett, PhD. *Aesthetic Surgery Journal*, Volume 37, Issue suppl\_1, 1 May 2017, Pages S20–S31, <https://doi.org/10.1093/asj/sjw282>.

Time to onset of response and duration of response are key measures of botulinum toxin efficacy that have a considerable influence on patient satisfaction in aesthetic treatment.

Onset of activity is typically seen within 5 days of injection, but has also been recorded within 12 hours with abobotulinumtoxinA. Duration of effect is more variable, and is influenced by parameters such as muscle mass (including the effects of age and sex) and type of product used. Even when larger muscles are treated with higher doses of BoNT-A, the duration of effect is still shorter than that for smaller muscles. Muscle injection technique, including dilution of the toxin, the volume of solution injected, and the positioning of the injections, can also have an important influence on onset and duration of activity.

Comparison of the efficacy of different forms of BoNT-A must be made with the full understanding that the dosing units are not equivalent. Range of equivalence studies for abobotulinumtoxinA (Dysport) and onabotulinumtoxinA (Botox) have been conducted, and results indicate that the number of units of abobotulinumtoxinA needs to be approximately twice as high as that of onabotulinumtoxinA to achieve the same effect.

When given at their recommended doses, the times to onset of effect ABO has a faster onset of effect than ONA and a longer duration of activity. Similar patterns exist for time to maximum effect and are also repeated for different target muscles.

An appreciation of the potential influence of all of the parameters that influence onset and duration of activity of BoNT-A, along with a thorough understanding of the anatomy of the face and potency of doses, are essential to tailoring treatment to individual patient needs and expectations.

**Comments:**

Abobotulinum Toxin Type A (Dysport) is an USFDA Approved Botulinum Toxin type A in aesthetic indications. Use of Abobotulinum Toxin is on rise. The unit conversions and diffusion of abobotulinum toxin are not same as that of onabotulinum toxin (Botox). The efficacy ratio of 2.5:1 for unit conversion needs to be remembered for Abobotulinum Toxin (DYSport): Onabotulinum Toxin (Botox).

As highlighted in the study personalisation of the treatment is necessary based on the individual muscle anatomy and severity. In authors experience there is significant faster onset of action in most of the patients receiving Abobotulinum Toxin. Usual dosages which I have used for Glabellar lines is 50 units, forehead rhytids is 25 units and crow's feet lines 25 units/side. Abobotulinum Toxin is very safe and easy to use and is not associated with any major or increased incidence of complications in my experience.

- **Dermal Fillers**

Small-Particle Hyaluronic Acid Gel Treatment of Photoaged Hands. Wilkerson, Eric, C., MD<sup>\*</sup>; Goldberg, David, J., MD, JD<sup>\*†</sup>. *Dermatologic Surgery*: January 2018 - Volume 44 - Issue 1 - p 68–74 doi: 10.1097/DSS.0000000000001251.

This is an open-label, prospective, randomized, interventional, study. Twenty-five healthy female volunteer subjects aged 40 to 70 years with photoaged thinning of the hands received an injection of an SPHA gel to the dorsal aspect of 1 hand. Subjects were followed up for 6 months

The average hand grading scores demonstrated statistically significant improvement at all time points compared with baseline. Eighty-eight percent to 100% of subjects achieved improvement at 1 month after treatment, and 50% to 83% maintained at least 1 point improvement at 6 months. There were no adverse events reported

**Comments:**

Hand Rejuvenation is a new exciting aesthetic treatment available for patients now. Usually appearance of hands gives out the age of the patients if only face treatments are performed for them. There is an increased evidence of wrinkling and hollowing of dorsum of hands and fingers along with prominence of blood vessels. Author prefers to treat hands with fillers in case of severe hollowing and with skin boosters in case of wrinkling and only photoaging. 23 G or 25 G cannula is used for injecting fillers in hands, usually the small particle Hyaluronic Gel is placed between the fasciae of hands. Mild swelling and bruising is experienced by a few patients for the first week after injection. Results usually last for 6-9 months.

- **Thread Lift**

Buttock Lifting Using Elastic Thread (Elasticum) with a new classification of Gluteal Ptosis. Chang Hyun Oh, Seung Bin Jang, *Aesth Plast Surg* (2018). <https://doi.org/10.1007/s00266-018-1124-z>

Conventional buttock lifting is invasive, so it is difficult to recommend it to patients especially to those who do not have severe gluteal ptosis.

60 patients were enrolled in this study. The degree of gluteal ptosis was graded from Grade 0 to Grade 6. All patients underwent lifting of both buttocks using Elasticum®.

We drew a circle along the outer edge of the buttock and another small circle inside the first circle. A stab incision was done at 5 points (A, B, C, C', and D), and then according to the circle, lifting was done.

Grades 2–5 were lifted to at least Grade 2 after surgery, but Grade 6 was at most Grade 3 (14.2%), with 85.8% of these to either Grade 5 or Grade 6. Seven patients (11.67%) complained of postoperative pain, and 6 patients (10.00%) showed skin dimpling or creases 10 days after surgery, all of which disappeared at 1 month after surgery.

Buttock lifting with elastic thread is effective in pre-ptosis to moderate gluteal ptosis.

**Comments:**

Author does not have a personal experience of using these threads which are not available commercially in India. Butt lifting as a procedure is definitely looked upon by a few highly conscious aesthetic patients and availability of such a procedure can help aesthetic practitioners and patients.



## IADVL ACADEMY 2018

### Chairperson

Dr. K A Seetharam

### Ex-Officio Members

Dr. Ramesh Bhat  
Dr. Yogesh Marfatia  
Dr. P Narasimha Rao

### Advisors

Dr. Rajib Gogoi

### Members

1. Dr. Niti Khunger
2. Dr. Yasmeen Jabeen Bhat
3. Dr. Sudhir Nayak
4. Dr. Col. Ajay Chopra

Dr. Umashankar N  
Dr. Shashikumar B M

Dr. Sunil Dogra

5. Dr. Sendhil Kumaran
6. Dr. Rajyalaxmi Reddy K
7. Dr. Veeranna Shastry
8. Dr. Lalit K Gupta

### Convener

Dr. Deepika Pandhi

Dr. Shyamanta Barua  
Dr. Ameet Valia

Dr. Saumya Panda

9. Dr. Sushil Pande
10. Dr. Maitreyee Pande
11. Dr. Analjyoti Bordoloi
12. Dr. Mahendra M Kura

## IADVL EXECUTIVE COMMITTEE 2018

### President

Dr. Ramesh Bhat

### President Elect

Dr. Narasimha Rao

### Imm Past President

Dr. Yogesh Marfatia

### Vice President

Dr. Mukesh Girdhar  
Dr. Jagdish Sakhia

### Hon Gen Secretary

Dr. Umashankar Nagaraju

### Treasurer

Dr. Shashikumar BM

### Jt Sec

Dr. Dinesh Kumar Devraj  
Dr. Prashant Palwade