



## **IADVL SIG Dermatosurgery (2019-2020)**

### **IADVL Academy**

#### **Patient education leaflet: Frequently asked Questions (FAQ's)**

#### **ACNE SCARS**

**Disclaimer:** This leaflet has been produced to give you general information. Most of your questions should be answered by this leaflet. It is not intended to replace the discussion between you and your doctor, but may act as a starting point for discussion. If after reading it you have any concerns or require further explanation, please discuss this with a member of the healthcare team.

**Acne**, also known as **acne vulgaris** occurs due to obstruction of the oil glands leading to blackheads or white heads, pimples, oily skin .It involves face and at times chest, neck and shoulder.

#### **1. WHAT ARE ACNE SCARS?**

Acne scars are permanent textural changes and indentations that occur on skin due to severe acne and scars cannot be erased.

#### **How are Acne scars caused?**

Acne scarring is often the result of delayed and/or inadequate medical treatment but can develop despite appropriate medical therapy. Collagen and other tissue damage, secondary to inflammation of acne, leads to permanent skin texture changes and fibrosis.

#### **TYPES OF ACNE SCARS:**

Hypertrophic or keloid scars – thick lumpy scars.

Ice-pick scars – these are deep, narrow, pitted scars

Rolling scars – broad depressions with a sloping edge

Boxcar scars – broad depressions with sharply defined edges



Atrophic scars – flat, thin scars or depressed scars

## **TREATMENT OF ACNE SCARS**

Acne scars can be managed by *AESTHETIC APPROACH*

- ▶ Microdermabrasion
- ▶ Chemical Peeling
- ▶ Chemical Reconstruction of Skin Scars (CROSS)
- ▶ Dermal fillers

### *MINOR SURGICAL APPROACH*

- ▶ Dermabrasion
- ▶ Subcision
- ▶ Fat transfer
- ▶ Scar revisions surgeries
- ▶ Punch techniques
- ▶ Skin Needling (Percutaneous Collagen Induction Therapy)
- ▶ Laser Resurfacing

## **2. What is the minimum invasive technique used for acne scars?**

Microdermabrasion and chemical peels are minimal invasive techniques, it provides textural benefit. The superficial acne scars may benefit from deeper and deeper ones needs more aggressive settings.



### **3. What are Chemical peels:**

The most commonly used chemical peels in treating acne and acne scars include salicylic acid peel, glycolic peel, Jessner's solution and trichloroacetic acid.

Peels can improve skin texture, pigmentation, and tone. However, adequate control of the peeling depth may be difficult to achieve.

### **4. What Is CROSS Technique?**

It uses chemical trichloroacetic acid over atrophied acne scars which leads to improvement in the depth of scars. Three to four sessions with three to four weeks interval is required to obtain optimum results.

### **5. How dermabrasion improves acne scars?**

This procedure removes the layers of the skin which are superficial and which in turn leads to remodeling of skin, increased skin thickness, and enhanced hydration.

It is primarily used for well-defined superficial scars with distinct borders or broad-based scars with indistinct borders. However, it is ineffective in treatment of deep scars, and demonstrates fair to moderate efficacy in moderate scars.

### **6. WHAT IS SUBCISION:**

It is the fibrous tissue (tethers) that binds down the scar. In subcision, the fibrous tissue is released, resulting in scar elevation. The induced dermal trauma results in clot formation and neocollagenesis with subsequent filling of the created space, which further enhances scar elevation.

### **SKIN NEEDLING (DERMAROLLERS)**



**Percutaneous Collagen Induction Therapy.** This modality creates microclefs in the dermis, and the subsequent dermal trauma initiates a wound healing process that induces a cascade of growth factors, resulting in collagen production

### **7. What are contraindications for Skin needling?**

It is contraindicated in the presence of anticoagulant therapies, active skin infections, injections of collagen or other injectable fillers within the past 6 months, and personal or familiar history of hypertrophic or keloidal scars.

### **8. MICRONEEDLING COMBINED WITH PRP?**

Platelet-rich plasma (PRP) injection is a modality that utilizes patient's own blood to correct acne scars. PRP contains a plethora of beneficial growth factors, which promote collagen and elastin regeneration. It is helpful in superficial acne scars.

Infact microneedling shows better results when combined with platelet-rich plasma (PRP) as it enhances the absorption of topical agents including PRP and the final result may only appear after 8–12 months.

### **9. FILLERS BE USE IN ACNE SCARS?**

Fillers can be used alone or in combination with prior subcision to improve the appearance of atrophic acne scars. Fillers containing hyaluronic acid, calcium hydroxyapatite, and poly-L-lactic acid (PLLA) are increasingly used to correct atrophic acne scarring. Injection of cross-linked hyaluronic acid improves the quality of overlying skin



Its effective in soft rolling or boxcar scars. Fillers can be used alone or in combination with prior subcision to improve the appearance of atrophic acne scars.

## **10. WHAT ARE DERMAL GRAFTS**

Dermal grafting, the implantation of appropriately dissected deep dermis (graft) into recipient areas, is an old procedure that is used to treat atrophic scars. Dermal grafting can be used to treat any round/oval facial scar that is soft, prominent, and at least 4–5 mm.

## **11. DISADVANTAGES OF DERMAL GRAFTING?**

Disadvantage of the procedure is that it involves multiple incisions that generate new scars.

## **12. HOW IS AUTOLOGOUS FAT USED IN ACNE SCARS?**

It is indicated for deep atrophic scars. It is advisable to perform subcision first. The longevity of correction is doubtful. Fat transfer has significantly improved deep acne scars and texture.

## **12. WHERE DO WE USE PUNCH TECHNIQUES IN ACNE SCARS?**

Punch techniques such as punch excision, elevation, grafting, or float techniques are considered the criterion standard for punched-out scars up to 3–4 mm in width (deep boxcar and larger icepick scars). These scars do not improve substantially with resurfacing procedures. The use of fractional resurfacing laser after punch techniques helps to even out scars



**PUNCH ELEVATION:** Punch elevation is a technique in which the scar is punched down without being discarded. The punched scar is then elevated and sutured in place at a level slightly higher than the surrounding skin

**PUNCH EXCISION:** The scar is excised down with the help of a punch instrument that is slightly larger than the scar, and the defect is closed with sutures along relaxed skin tension lines.

Punch excision and elevation is best suited for small (B 3 mm) acne scars.

### **13. WHERE ARE ELLIPTICAL EXCISIONS INDICATED?**

It may be the only treatment for very deep irregular-shaped scars in difficult locations

### **14. HOW IS Botulinum Toxin USED IN ACNE SCARS?**

Botulinum Toxin causes relaxation of the muscles and lasts for 4 to 6 months can be beneficial, especially for acne scars in areas such as the forehead, glabella, and chin. As severely atrophic (grade 3) acne scars can be aggravated by normal muscle movement,

### **15. HOW ARE Fractional Lasers HELPFUL FOR ACNE SCARS?**

It leads to formation of zones due to injury which further leads to repair of the skin. It improves moderate to severe acne scarring and yields superior outcomes when compared with nonablative lasers.



## **21. Fractional radiofrequency devices**

Fractional radiofrequency (RF) modalities, such as FMR and bipolar FRF, provide excellent results in the treatment of acne scars, especially small scars. Compared with FLs, FRF is better for patients who are sensitive to pain, and treatment has a shorter downtime and are preferred in darker individuals with least chances of PIH. It enhances dermal matrix regeneration; it results in improvement of skin roughness in [70% of patients with acne scars and large pores.

## **22. WHAT IS THE TREATMENT OF HYPERTROPHIC/KELOIDAL ACNE SCARS?**

Hypertrophic scars are treated first with a vascular laser such as pulsed dye laser (PDL) with concomitant intralesional triamcinolone acetonide (TAC) or 5-fluorouracil (5-FU)

Intralesional 5-FU 50 L can be used alone or mixed with a low-strength steroid.

## **23. WHAT ARE THE FACTORS ON WHICH OUTCOME OF THE TREATMENT DEPENDS?**

Patients with moderate to severe acne scarring most often need multimodality therapies for optimal and faster results, and the cost of such is an important aspect to discuss from the beginning. Acne scar type and severity, dyspigmentation, textural issues and patient's skin type need to be considered to optimize outcomes.