

Combination Therapy of Subcision and Dermal Filler with Hyaluronic Acid HA

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Abstract

Background: Subcision is efficacious treatment method for acne scarring. This treatment entail to insert a small/little needle into you skin to treat acne scars. This allows your skin to diminish the acne scar appearance and give rise to depressed area. Aim: To improve the efficiency of subcision, a new supportive treatment of continuous repeated sessions of hyaluronic acid HA was added to subcise the post acne scars.

Methodology: This is a randomized clinical trial study conducted on different groups of patients in different dermatologic clinics.

Result: subcision with dermal fillers show more effective result than single subcision therapy.

Conclusion: Use of combination subcision therapy in treatment of post acne scars was accompanied with appropriate results.

Keywords: Subcision, Hyaluronic acid HA, Post acne scars, subcision filling, Subcision with dermal fillers.

Introduction

The cosmetic disfigurement of face post acne and is the most common problem. The disfigurement is associated with many problems for people such as social embarrassment and psychological disorders. Social isolation and self-consciousness is the most common [1].

Acne vulgaris is the composite disease of pilosebaceous unit. The people of all age can be affected by it. Surgery, burns, vaccination and skin disease such as acne and varicella induce facial scarring. Local cellular and hormonal responses are the main cause for color, size and shape of acne scars. Facial scarring arises from deep inflammatory reaction. Acne scarring treatment depends on the type of scars. There are three basic types of scars. These are rolling scars, ice-picks scars and boxer scars. [2] The skin appears wavy and uneven and have varying depth in rolling scars while the Boxer scars have box Like depression and broad and it may be caused by virus, chickenpox, varicella and Acne .And the most common type of scar is ice-picks scar, common on cheek's and occur after the consequences of healing of acne.[3] Among adolescent, the prevalence of acne is 90% .75% of patients affect with facial scarring.[4]

Numerous curative methods have been evolved to set out acne scarring. Which include chemical peeling, punch techniques, dermabrasion, laser resurfacing dermal fillers and most recently used subcision. [2] In order to treat acne scars subcision is effective treatment method. This treatment entail to insert a small needle into you skin to treat acne scars. This allows your skin to diminish the acne scar appearance and give rise to depressed area. [5]

In 1957, Spangler reported that Bowmen's iris needle is used to slit fibrous strand underneath enormously depressed facial scars. In 1995, the name subcision and subcutaneous incision less surgery was given by David Orentreich and Nor Man Orentreich. [6]

When the fibrous bands are break, the snapping sound will be heard. A small bruise formation, this actually assisting with the tissue remodeling. Pressure and ice application can be given to maintain homeostasis. Swelling and Bruising may be expected which may be

last up to two weeks. One should must also think a treatment course preferably than a single therapy. Darker skinned patient should be more attentive with regard to sun exposure because of higher risk of post inflammatory hyperpigmentation. Disordering of sebaceous follicle structure may an outcome in acneiform cystic lesions or subcutaneous sinus tract-this may be treated with antibiotics and very low dose of intralesional triamcinolone injection. The only conditions to treatment are active infection and bleeding tendency.

Early result examination in fifty patients with rolling scars was restore. Following infiltration with a result a solution of 1% lidocaine with 1:100,000 epinephrine.

In a standard method, An 18-G nokor needle was used to subcise. Investigator rating an average 50-60% improvement in treatment site within 1 to 6 months in post-procedure. There is no complication are observed.

In another series, 24G needle is used to subcise followed by 15 patients in 3 three sessions. 40 to 60% improvements were seen in between 2 months and 6 months. Persistent hematomas were developed in two patients. [7]

Eight patients within 2 sessions, rolling acne scars are treated with, No.18 and No.21 cannula. Estimated 50% reduction in lesions count and outcome were very satisfying and good.

This article describe specifically on the procedure of subcision with combination therapy of hyaluronic acid HA. Subcision is novel

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treatment option for acne scars and can be used with hyaluronic acid HA reduces the total number of sitting. [2]

Method

A study was carried out in which there were forty patients involving both men and women with acne scars. All the patients were exposed to subcision for at least one month in three sessions. At the last of the session the patients were classified into two groups. First group with the patient receiving subcision in combination with hyaluronic acid on one side of face leaving other side that undergo subcision. During the procedure there was clinical assessment. Skin biopsies and photographs were taken for 6 months in order to check the improvement.

Result

94.1% and 82.4% significant improvement in subcision with hyaluronic acid HA as fillers were seen in first group of patients while there is 67.3% of improvement were seen in subcision alone procedure, respectively.

At the end the results were amazing in patients having subcision combined with hyaluronic acid as compared to the group of patients having subcision alone. [8]

Discussion

Hyaluronic acid is a sticky/goosey and oily substance. Hyaluronic acid present throughout the body particularly in joints, eyes and skin. HA makes your skin flexible, also help the skin to straighten and flex and reduces fine lines and skin wrinkles. HA also prove to be faster wound healer and reduce scarring. [9] When performed accurately, subcision show slow result a permanent and significantly refinement of post acne scars. Subcision may be advised to repeat the procedure. Skin heals very slowly after subcision procedure and scars continue to form after one year. Due to tatters and atrophy (loss of fat, volume and collagen). Scars are depressed. In these cases, subcision may be get together fillers under every scars. [10]

The materials used for subcision is Nokor needle or structured / regular needle (can be used some needle size depend the experience and quality of scar). The procedure could be replicate in some session depend on the deepness and development of scar and can be connect with some other scar treatment such as dermal fillers with hyaluronic acid HA.

Hype syringes and scalpels are the instruments that used in subcision The needle is placed about the scar at an acute angle close to the scar and use in back and forth manner underneath the site of scar to slack the fibrotic adhesion that enervated the scar. A break sound is heard as fibrous bands are broken. The swelling and hemorrhage produce a potential space for more collagen overthrow. [10]

➤ Journal of cosmetic dermatology was published in March 2022 on subcision plus three step HA injection for acne scars and this

treatment is found to be very effective and safe. This treatment included the subcision and hyaluronic acid HA injections. 82 patients were divided in two groups. Group 1 treats with subcision Saline injection .while another group receive three step hyaluronic acid HA with subcision. The first step in combination of subcision with hyaluronic acid HA using 18G nokor needle to release fibrous band beneath the subcutaneous tissue.2nd step is used in combination therapy, hyaluronic acid HA 0.1 ml using 29G needle. In third step, used 25G cannula to fill the subcised space with hyaluronic acid HA 0.1ml.

Clinical improvement was in both groups. There were seen very satisfying significantly improvement in three step hyaluronic acid HA combine with subcision. [11]

➤ Data obtained from the study published in the journal of cosmetic dermatology suggests that subcision combined with hyaluronic acid is better to reduce acne scars. Patients involved in this study were presented to a university clinic in Egypt from 2019 to 2020. Patients were given 3 sessions for 4 weeks on both sides of face. Clinical improvements were evaluated for 2 months. There were Total 30 patients out of which 12 were men and 18 were women.

In conclusion Clinical improvement was greater with the addition of HA fillers. Patient satisfaction was higher with the combined treatment. [12]

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