

Case Report: Autologous Fat injection might conceal facial scars

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Abstract

A 38 years old Man subjected to stab injury 3 years ago. On presentation, 9 month ago, a tethered and depressed scar was observed on the left cheek. He was seeking medical advice concerning improvement of the scar appearance. A complete clarification of the condition was explained to the patient as “Once Scar always Scar “but will do our best to improve the scar as far as we can. Autologous fat injection was decided without any scar excision. Autologous fat grafting plays a significant part in facial rejuvenation. Indeed, thanks to its filling properties and the role of ASCs, the unique regenerative potential of lipofilling results in excellent results. Traditional facial rejuvenation approaches have relied on subtractive surgical techniques, focusing on skin , muscle and/or fat excision. Instead, modern approaches focus on filling the "ventilated" facial compartments, mainly through fat grafting. Traditional fat grafting involves Coleman's harvesting technique with 2 mm side-port cannulas, followed by the distribution of a structural fat implant from deep to superficial throughout the various dermal layers of the face. Body fat makes filler material excellent for soft tissue. Fat injection (also called autologous fat transplantation) transfers fat over the face from one part of the body to another; decreases frown lines, crow's feet and nasolabial folds (smile lines); and defines areas such as cheeks and chin. It can also be used at any part of the body to fill depressed scarred areas. Fat injection is not permanent, and an effective maintenance program may be required. Local anesthetic is injected into the donor site (abdomen, buttocks, or thighs) and treatment site. To facilitate collection of fat, intravenous fluids are also injected into the donor site. Fat cells are extracted by means of a small needle fixed to a syringe. The fat is then processed in multiple thin strands in the desired area to remove excess fluids, and reinjected with another needle. "Overfilling" is a necessary corrective in the weeks after treatment, due to fat absorption. Fat can also be harvested in one area of the body during a lipoplastic procedure, and then reinjected into another. In general, patients receive 3 to 4 treatments over a six-month period for longest-lasting effect. This type of procedure has the benefits of being natural, non-allergenic. Outpatient procedure which usually takes less than an hour. Injections can last from a few months until permanent. Small to no downtime. Minimum discomfort, controllable with medication. Since fat comes from the patient's own body, no pre-testing is required and the fat can't be dismissed. If the patient is allergic to bovine collagen, then a good alternative. If combined with another procedure such as lipoplasty (liposuction) cost effective. Other considerations include, the longevity of outcomes may vary considerably from patient to patient. Some swelling, bruising — usually approximately 48 hours. Until the condition subsides, patient should avoid the sun. Not every area is suitable for injection into fat. For example, injecting fat into the breast makes it harder to detect cancer via mammography and is strongly discouraged. Lasts the longest in relatively stationary areas (such as the cheeks) when reinjected. In this case, as the patient came for scar treatment, we didn't have a problem. Under local anesthesia, two small incisions within the umbilicus and fat was harvested using 3 mm cannula using power assisted liposuction.

Preparation of fat by turning the syringe down and letting the fat get concentrated by gravity. Creation of tunnels underneath the facial scar separating the scar from the underlying SMAS using 17 gauge needle and injection of fat using leur lock syringes Fat was injected in these tunnels and over correction was done. The patient underwent two sessions of fat injections with 3 months apart.

Conclusion:

Patients with retractile and painful scars may benefit from lipofilling treatment which compromises the normal daily activity / mobility of the joint involved. In fact, fat transplantation can not only be used to fill atrophic scars but also to reduce the contracture of scars as a regenerative alternative to other surgical techniques. From a histological point of view, autologous fat grafts show the ability to regenerate the dermis and subcutaneous tissue and improve the dermal and dermohypodermic quality in scarred areas, with increasing amounts of fat layer-largely destroyed in thermal insults and poorly regenerated in tissue repair after any type of trauma-new collagen deposition and local neoangiogenesis. It is thought that the regenerative role of fat in scarred areas is attributable to the release of multiple nerve trapments, in order to improve neuropathic pain. Additionally, improving neurogenic pain can be maintained by placing fat grafts around the nerve to avoid recurrence of cicatric contracture. Autologous fat grafts enable skin to become softer and more flexible and extensible, and very often the color appears similar to that of the unaffected skin around. Another important quality of scar release, both superficial and deep, is the improvement of the mobility of the part of the body involved, in particular the affected joints, eyelids, nasal valve and mouth, as well as the possibility of partial facial expression restoration for the patient. In patients with marked skin depression, scar release by autologous fat grafting often fills these volume deficits, producing excellent cosmetic results and having a positive effect on the patient's body image. Fat injection has a marvelous effect in scar management and might lead to inconspicuous scar. Two sessions at least are recommended with 3 months apart to achieve excellent results