

Treating scleroderma of the face and hands with fat and Stromal Vascular Fraction

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Background : Since 2009, we have treated systemic sclerosis patients. Systemic scleroderma is an autoimmune disease characterized by varying degrees of fibrosis in the skin and other tissues.

Materials & Methods : We treated the faces of 14 patients using micro-injection with a minimally invasive closed filtration system, aiming at volumetric and trophic effects. We used 16 to 22 cc of fat., which was harvested with 14 gauge or 2mm cannulae, and reinjected with 21 gauge or 0.8mm cannulae.

In addition, we treated 12 patients (24 hands) with the Stromal Vascular Fraction, aimed at an angiogenic and anti-fibrotic effects. We harvested 135-270 g of fat which allowed us to get 5 cc of stromal vascular fraction with the Celution system. We got on average 50×10^6 cells which were divided into 10 doses of 1 cc . A subcutaneous injection was performed in the patient's every finger with 25 gauge or 0.5mm cannulae.

Both facial and finger procedures were performed under local anaesthesia

Results : On the face, we observed a continuous improvement process. The pain was reduced in the temporomandibular joints, the tissues softened, the buccal aperture was improved with special consideration to the aesthetic enhancement. The improvement was immediately assessed. Some patients underwent a second injection procedure, 2 years after the first one.

With respect to the hands, we observed spectacular results, with a very rapid improvement of the vascularisation of the fingers and later of trophic disorders that allowed a functional enhancement and a better quality of life. Results persist beyond the third year. No complications were observed.

Conclusions : We conclude that microfat grafting on the face is efficient to treat functional and aesthetic disorders. The injection of stromal vascular fraction in fingers triggers an obvious functional improvement in every day life activities. Two randomized clinical trials are underway in France and USA. Overall, these safe and minimally invasive techniques provide an important benefit in terms of aesthetic and functional improvements.