Treatment of hypertrophic scar with ablative fractionated CO2 Laser in melanoma patient

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Background

A 53-year-old woman presented with a 12-cm hypertrophic scar on her left forearm following melanoma excision (Tis) externally, six months after the surgery. In this case report, ablative fractionated carbon dioxide laser (AFL) was used to treat a postoperative scar following melanoma surgery. Laser technology can selectively target and remove fibrous scar tissue by using selective thermolysis. It had a significant impact on the psychological well-being of the patient.

Observation

When melanoma is excised, hypertrophic scars and keloids may develop. In our case, according to the guidelines, this patient's melanoma in situ required an excision with safety margins of 1cm, leading to cosmetic and functional deformities, psychological stress, and patient dissatisfaction. For this reason, dermatologists must address scar prevention and management, including surgical and nonsurgical approaches, to minimize these adverse effects. We performed five monthly treatments with an AFL under topic anesthesia with lidocaine cream and air cooling, followed by the application of moisturizer for a week and the recommendation of a sunscreen with a minimum SPF of 50+. In our case, we achieved about 70% better skin quality, less skin tension and pain.

Conclusion

Although optimal efforts can be made to avoid scar formation, aberrant wound healing may still occur. Pre-procedure assessment of the patient's scar and skin type is crucial to determine the appropriate treatment option. AFL resurfacing is a well-tolerated and effective treatment for post-surgical scars in skin cancer patients.

Pre/post-operative

Before the laser treatment

After 5 laser treatments