

# Lifting dorsal da mão: uma nova abordagem técnica

MARKUS HANDLE, LUIZ MÁRIO BONFATTI-RIBEIRO, BARBARA HELENA BARCARO MACHADO, IVO PITANGUY

## Introduction

In addition to its great functional importance, the hand is gaining in esthetic value in today's society. Prevailing skepticism about surgical approaches is fueled by the visibility of scars on the surface of the hand, as in former approaches. For this reason, minimally invasive techniques treating skin texture, age marks, prominent veins and tissue loss dominate the cosmetic "market". However, aside from the risks entailed, none of these techniques gives fully satisfying results or treats the existing skin excess of the aged hand. A young hand is characterized by its smooth skin surface, texture and elasticity, subcutaneous soft tissue content and sportive appearance. The rejuvenation procedure has to restore all these features. When rebuilding a tight dorsum of the hand, correction of skin excess can not be ignored; this can not be achieved with minimally invasive methods. Major limitations for surgical approaches in the hand are its high degree of exposure and its functional importance. Any esthetical or functional changes are perceptible. To address these limitations we developed the "minimal-scar handlift", that leaves a scar of limited size located in a unique position distal to the bony prominence of the caput ulnae, where it is nearly invisible in the regular ulnar tilted hand-arm position. Recovery time in all our patients was remarkably short. Patients started using the operated hand in daily routine after two weeks; limitations for up to six weeks were made only for the dominant hand and depended on the type of work to be performed. We classify this surgery as a moderately invasive and cost-effective procedure.

## Objective

Excision of excess skin in the aging hand causes scars in one of the body's

most visible areas. We developed a new technique that limits scar size and its visibility by locating the incision in a unique position on the ulnar side of the dorsum of the hand. This treatment tightens the aged skin and complements the rejuvenating effects of minimally invasive procedures.

## Method

Skin excess as the indication for surgery was quantified by a manual "pinchesT". Changes in postoperative stress ratio were visualized. A new skin flap advancement and rotating technique was used. This "minimal-scar handlift", performed under local anesthesia and sedation, created an "S-shaped" scar. Both hands in each patient were treated separately, at an interval of two to four months, in 11 patients from March to September 2009.

## Results

The rejuvenation effect of this surgical procedure was accompanied by great satisfaction with regard to scar size, quality and location. No major complications such as infection, flap necrosis or nerve damage was observed. All minor complications were treated conservatively. Fitzpatrick skin types I-III profited from less scar visibility; recuperation was quick, independent of skin type.

## Discussion

The aging process of the hand is characterized by changes in superficial and deep anatomic features. It can be compared with the aging process of the face, whereby gravity plays a less important role and wrinkles are more the result of structural changes and tissue loss than a result of function and movement. The challenge is presen-

ted by a mismatch between the overlying skin envelope and the amount of underlying soft tissue. Tolerance of scars and complications is extremely poor in a purely esthetic treatment; function must also not be jeopardized. These concerns explain the persistent resistance to surgical approaches in the hand and the preference for minimally invasive techniques, even if non-surgical approaches fail to treat the important skin excess. Nevertheless, as in the face, patients accept scars with low visibility for a rejuvenating effect. The limited scar visibility and low complication rate opens the door for a broader indication for this surgery. As in the face, the complexity of aging requires an interdisciplinary approach. This handlift is the first of its kind to meet the requirements for esthetic outcome. In comparison to already published techniques, such as that of Wendt, the resulting scar is limited in size, well-placed in a unique position to limit visibility. The use of a bone structure, the caput ulnae, as a pivot point makes this technique unique and shows its affinity to a classic facelift procedure. The idea to place the scar in a protected and less visible position, thus limiting tensile forces by the developed flap advancement and rotating technique, worked well and was reflected by high scar quality and patient satisfaction.

## Conclusion

This new surgical approach plays an important role in connection with minimally invasive techniques for rejuvenating the hand. Treatment of skin laxity and excess is effective. Caucasian skin profits most from this low-risk, moderately invasive procedure.